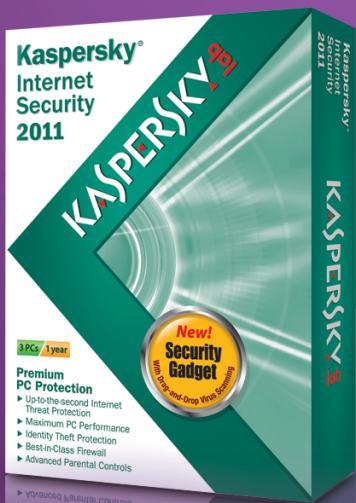


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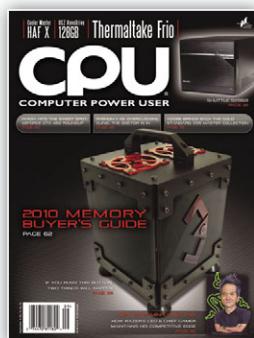
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A Look At Router Protocols p. 38



Since 1979, Sandhills Publishing has produced publications covering technology beginning with the introduction of *Processor*. Over the years, the company has developed a complete line of computing publications, encompassing *Smart Computing*, *PC Today*, *Computer Power User*, and *First Glimpse*.

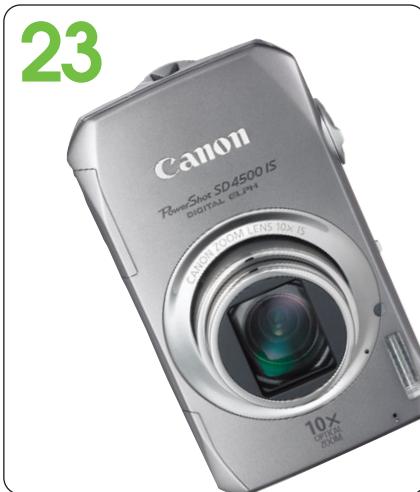
Our plain-English approach has served audiences well for 30 years, ensuring they receive accurate and unbiased technology information to meet their needs.



FirstGlimpse®

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To clarify last month's Livescribe Echo smartpen cover story, the feature that lets you share notes and recordings as a Pencast PDF won't be available until Fall 2010.

Get Details On The Latest Product Arrivals



Invented for life

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Bosch 500 Series Washer & Dryers

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The Connected Home

Discover New Possibilities With Today's Technology

TODAY A WIDE VARIETY of digital devices and technologies work together to make all kinds of information available whenever and wherever you need it. Stream movies to your home theater; download photos from a relative overseas to a photo frame in your living room; or upload music from your MP3 player to your car. Whatever you want to do, there's a product out there to help you do it. Use this digital home blueprint to identify the types of things you want to do, and then go to the appropriate pages to learn about related products and technologies.

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For many of us, a cell phone is a daily companion. To get the most out of this device, look for accessories in our Portable Devices section.



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ce news

BY ANDREW LEIBMAN

GPS Boom

ABI Research is reporting that the most important application for GPS device users is traffic information, and the number of people who rely on traffic data from personal navigation devices will explode from 57 million users currently to more than 370 million users by 2015. Why all the fuss? ABI claims that users seem to love navigation devices with traffic reports because of their ability to determine faster routes, provide accurate directions, and deliver spot-on ETA calculations.



Windows 7

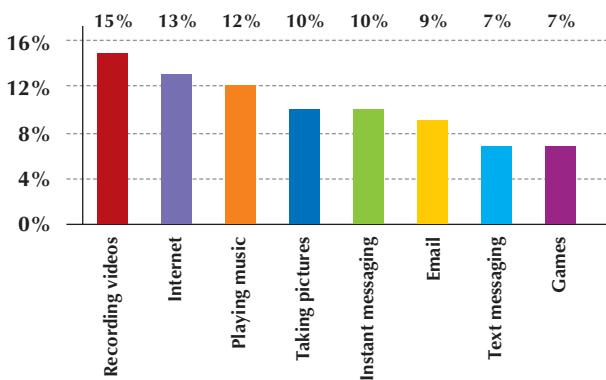
64-bit Adoption Spikes With Windows 7

64-bit operating systems are capable of handling more memory than 32-bit versions, but for the first time, Microsoft is reporting that Windows 7 is close to achieving 64-bit/32-bit parity. After just nine months of availability, 46% of the installed base is running Win7 64-bit, and 54% are running the 32-bit flavor. Vista, which has been available for three and a half years, shows an 11% 64-bit installed base, and Windows XP's 64-bit installed base currently stands at less than 1%. According to the company, the uptick in 64-bit adoption is due in part to wide availability of more competent 64-bit-capable CPUs, cheaper memory, and mass adoption from large PC resellers.

Cellular Activities

With advanced features quickly becoming standard on mobile phones, people are beginning to use them in new ways. The Pew Research Center's Internet & American Life Project has revealed that in the past year, the percent of users who record video with their phones has risen by 15%. The research also reveals that activities such as accessing the Internet, playing music, and emailing have all risen 13%, 12%, and 9%, respectively. Taking photos and instant messaging each rose 10%, and texting and game playing rose by 7% in the past year.

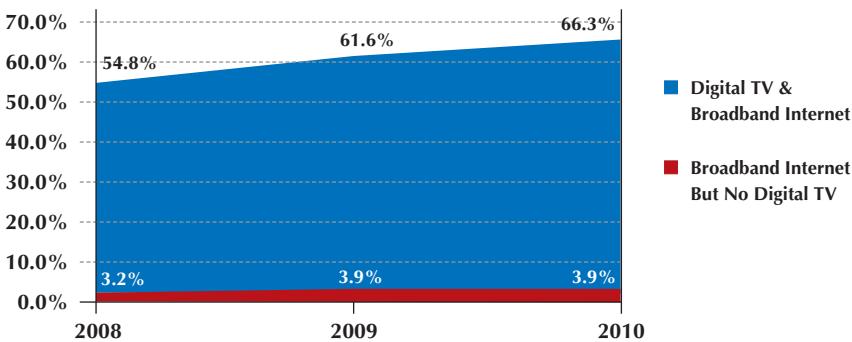
Increase In Mobile Phone Activities Between 2009 & 2010



Digital TV Subscription Is No Dodo

A new report from Nielsen casts doubt on the idea that people are tuning into Web-based alternatives and, as a result, canceling their digital TV subscriptions en masse. According to the research firm, younger households do appear to prefer Internet video to traditional broadcast subscriptions, but they represent a relatively small group. Between 2008 and 2010, the percentage of the U.S. population that subscribes to both cable TV and broadband Internet services has risen from 54.8% to 66.3%. In the same timeframe, the percentage of those who have kept the Internet subscription but opted to forego the cable one has crawled up only slightly, from 3.2% to 3.9%. In the past year alone, the cable-cutting portion of the population hasn't risen at all.

% Of U.S. Digital TV & Broadband Internet Subscribers



tidbits

The Leichtman Research Group recently revealed that although 77% of U.S. broadband customers are unsure what their broadband speeds are, 71% are very pleased with the service. Those who were not satisfied only represented 3% of the sample.

Source: Leichtman Research Group

Retrevo recently asked consumers if the ability to stream HD content over Web-connected TVs would dissuade them from jumping on the Blu-ray Disc bandwagon, and just 5% said yes. Eight times as many survey respondents, however, said they either plan to buy or are considering buying a Blu-ray Disc player this year.

Source: Retrevo

The security outfit Sophos claims that the United States churns out more spam than any other country, approximately 15.2% of all of it. India is a distant second with 7.7% of the spam share, followed by Brazil, the UK, and South Korea, with 5.5%, 4.6%, and 4.2% of the spam pie, respectively.

Source: Sophos

Gartner recently predicted that there will be 55% more mobile payment users this year than in 2009. In 2009, 70 million people worldwide used mobile payment methods, and by the end of this year, that number will grow to 108.6 million.

Source: Gartner

Pioneer's Home-Theater Speakers

A High-Quality, Budget-Friendly Solution



To help you take your home-theater experience to another level, Pioneer's (www.pioneerelectronics.com) latest speaker components were masterfully designed to deliver optimal sound. Enlisting the expertise of renowned speaker engineer Andrew Jones, a high-quality, high-value speaker series was born. What's more, this exceptional audio solution doesn't come with a premium price and can be found exclusively at Best Buy.

Advanced Design

Unlike comparably priced speakers that use a low-cost "box style" cabinet, Pioneer's bookshelf, floor standing, and center speaker all have a curved cabinet design. This fabrication method creates a rigid speaker body that won't impair sound waves and allows the speaker to deliver precise audio clarity that will take your movies, video games, and sporting events to a new level of entertainment. Adding to the modern look of the curved cabinet design, each speaker also has individual driver metal grills to protect its internal components.

Internally, the speakers contain a high-quality crossover made from a minimum of six components (similar speakers only use two). The result is a holistic sound that's delivered from your A/V receiver to each speaker.

A Complete Set

Each component from Pioneer's speaker series can be purchased individually or combined to create a complete surround-sound home-theater audio setup. There are four speakers in the lineup—the SP-BS21-LR bookshelf speaker pair (\$89), SP-FS51-LR floor standing speaker pair (\$199), SP-C21 center speaker (\$79), and SW-8 subwoofer (\$149). While the center speaker sits above or below your HDTV and the subwoofer can be placed wherever it's most convenient, you can choose between the bookshelf or floor standing speaker pairs to create an optimal audio layout for your space.

Get More Info

To learn more about Andrew Jones' design and the philosophy behind the Pioneer speaker series, download a free QR (quick response) code app from the Android Market or iTunes App Store and scan this code with your smartphone.



HOW TO BUY A

3D TV

Bring 3D To Your Living Room



It's true—the three-dimensional entertainment experience has finally made the move from the cinema to the living room. With the right home-theater equipment, you'll be ready for the thrills and chills of in-your-face 3D content. And it all begins with a 3D TV: Here's how to purchase a good one.

3D support. Today, you'll find 3D-ready HDTVs based on plasma, LCD, LED-LCD, and DLP display technology. Among other things, 3D TVs must be able to handle a 120Hz or higher input signal and support an equal or faster screen refresh rate.

Picture quality. A 3D TV can also play 2D content normally. Some can even add an impression of three-dimensional depth to ordinary two-dimensional video. Be sure to check image quality in both 2D and 3D modes. Look for crisp details and smooth motion. Black parts of the picture should appear black, not gray, and you should be able to discern details in dark-colored objects.

Other attributes. Some other 3D TV shopping tips are the same as pointers for buying mainstream HDTVs, such as to consider your room size and viewing distance when you select a particular screen size. Currently, 3D TVs come in screen sizes

popular with movie lovers, namely from 40 to 73 inches as measured diagonally. Also consider the online media streaming services each TV can access.

... consider your room size and viewing distance when you select a particular screen size.

Other necessities. For 3D television channel programming, you'll need to buy a set of the TV manufacturer's recommended

eyewear for each family member. (One pair may come with your 3D TV.) To watch 3D BDs (Blu-ray Discs) as

they come out, you'll also need a 3D-compatible player or game console and an HDMI cable capable of 10.2Gbps speed (such as HDMI version 1.4). Finally, if you want surround sound, you'll need a 3D-ready audio receiver for the proper video-to-audio sync.

... you'll also need a 3D-compatible player or game console ...

Internet-Connectable Devices

Bring The Web Into Your Living Room

First there were antennas. Then came cable, video tapes, and movie discs. And today, the Internet is becoming an increasingly important way to get home-theater entertainment. From on-demand movie streaming to product firmware updates, from bonus BD (Blu-ray Disc) content to online radio, Internet-connectable home-theater devices deliver.

Web-Enabled Entertainment

You can shop for:

- HDTVs that are Internet-connectable for access to CinemaNow, Netflix, and more
- BD players with support for BD-Live and online video streaming
- Video-game consoles with online play, Web browsing, and movie streaming capabilities
- Audio receivers, HTBs (home theaters in a box), bookshelf stereos, and multi-room sound systems that tap into Internet radio and locally networked audio files

Networks To Connect Your Devices

Wireless. The nice thing about a Wi-Fi network connection for your home-theater devices is the fact that you won't have to worry about any cables in between. To get started, you'll need a wireless router, preferably one that is compatible with 802.11n, g, and b. Connect the router to your Internet service through a cable or DSL modem. Finally, follow your home-theater device manufacturer's instructions to wirelessly link it to the Internet through your Wi-Fi router.

Ethernet. A traditional wired network generally makes audio and video streaming to your home theater more reliable than a wireless connection. And because wires can maintain high data rates, you can enjoy streamed video in high definition. Run an Ethernet cable from your home-theater device to your network router or modem, and plug it into a LAN port on either end. You can hide the cable under baseboards or route it through your walls.

Powerline. A powerline network gives you the speed and reliability of a wired connection without requiring you to run cable through your house. It uses your home's electrical wiring to send data, which turns practically any outlet into a network port. Plug a powerline adapter into a wall outlet and also into your router or modem with an Ethernet cable. Do the same with a second powerline adapter, another Ethernet cable, and your home-theater device. If you have more than one Internet-connectable gadget in your living room, you can add an Ethernet switch they can share.



BY MARTY SEMS

FirstGlimpse

Wireless & High-End Audio Features In One

Insignia's A/V Receiver With Rocketboost Technology

Anyone looking for a home-theater A/V receiver these days is in luck. There's plenty of support for top-flight BD (Blu-ray Disc) features such as 3D video and high-def audio. At the same time, prices have become very reasonable.

One example, Insignia's NS-R5101AHD-A Surround Sound A/V receiver with Rocketboost (\$279.99; www.bestbuy.com), stands out even more. It's compatible with an array of Rocketboost wireless products (sold separately) that let it send or receive audio all over your home, including outdoors, and has other features that can enhance your home-theater audio experience, such as support for high-def audio formats.



with **rocket
boost**
wireless
Expandable Wireless Audio

Wireless Capabilities

The receiver's Rocketboost wireless audio technology gives it wireless access to your subwoofer and satellites without making you run speaker cables all over the room. This can save setup time, as will Audyssey 2EQ automatic audio channel calibration.

Rocketboost also lets you send wireless audio to a second zone in your home, so family members can enjoy great sound in another room. Conversely, the receiver will be able to receive wireless audio from other Rocketboost devices, such as one connected to your PC or MP3 player.

Top Features

The home-theater enthusiast in your family will be cheered to know that the NS-R5101AHD-A is also a full-featured A/V receiver with the latest features, including support for 3D Blu-ray. And all popular audio formats are handled by the 90W-per-channel system, even high-def DTS-HD Master Audio and Dolby TrueHD soundtracks.

This Insignia A/V receiver addresses some other audio pet peeves, too. Its Audyssey Dynamic Volume feature keeps commercials from blaring too loudly. And for those times when you have to keep the volume turned down low, Audyssey Dynamic EQ preserves clarity in the bass and surround channels.

Throw in lip sync, Deep-Color, and x.v.Color support, and you might have to do a double-take at the NS-R5101AHD-A's price.

Three Is The Magic Number

The Technology That Makes 3D TV Possible



Last year, an HDTV was the crown jewel of a home theater. Today, it's a 3D TV that can switch between 2D and 3D content in HD resolution playing from, say, a 3D BD player. Nearly every major TV manufacturer is developing a 3D TV line, and several have already released models. Further, A/V receivers that can accept 3D signals are turning up, as is 3D content from broadcasters, including portions of the 2010 Masters Golf Tournament. Despite the considerable buzz 3D TV is generating, however, confusion about how it works remains.

Polar Opposites

Unlike active shutter glasses, polarization glasses have no moving parts. Instead, each lens uses a filter that allows certain light the 3D movie emits to pass to the left or right eye. With either polarization or active shutter technology, anyone seeking to witness the 3D effect must wear respective 3D glasses. At least one pair of active shutter glasses is typically included with a 3D TV. They each cost \$150 or more separately.

The 3D TV Of Tomorrow

Despite the revolutionary changes 3D TV is bringing, the movement is still very young, and available 3D content is relatively limited. Over the summer, however, DirecTV planned to launch four dedicated 3D channels, including one ESPN channel. By year's end, dozens of BD movies in 3D, including possibly "Avatar," are also expected. Better, manufacturers are working on 3D TV technology that doesn't require wearing glasses to enjoy.

In The Eyes

To understand 3D TV, consider the human eyes, which reside several inches apart and thus see objects at different angles. The brain morphs the images into one, adding a sense of depth to objects. Similarly, a 3D TV sends slightly different images to each eye. Special glasses help trick the brain into forming one image complete with the coveted third dimension. The primary 3D TV technologies now in use are passive polarization and frame sequential, otherwise known as active shutter. Passive polarization is the method 3D movies in theaters rely on. Active shutter is the technique that consumer 3D TV makers are using.

An active shutter setup includes a 3D TV, usually with a 120Hz or 240Hz screen refresh rate, and active shutter eyeglasses that contain what is essentially an LCD in each frame. As 3D content plays, the TV continually alternates between sending one image to the right eye and then another to the left. Batteries and electronics in the glasses darken the right or left lens to block or accept the corresponding image. A wireless transmitter in the TV and receiver in the glasses synchronize the signals, which happen so rapidly most wearers don't notice the lens's perpetual flickering. One caveat is that alternating frames essentially cut the frame rate of the media playing in half.

BY BLAINE FLAMIG

Digital Services Overview

Connected HDTVs Expand Entertainment Options

Somewhere along the way, your television stopped being merely a television and became a sophisticated multimedia device. Internet-connected HDTVs do more than just display over-the-air or cable programming in high definition. They now feature streaming digital services that provide a growing array of entertainment and information options. Remember that not all content is available on every HDTV. To learn about other home-theater products that can connect to the Web, see "Internet-Connectable Devices" on page 10.



Media Services

Feel like watching a recently released movie? Your Internet-enabled HDTV can help. With services such as Netflix, Amazon Video On Demand, CinemaNow, and Blockbuster OnDemand, you can pop some popcorn, use your remote control to order up a first-run movie to watch instantly, and sit back in the comfort of your own living room or den. Monthly fees or per-movie charges apply.

YouTube

YouTube is a cultural and technological Internet phenomenon. With it, you can use your TV to watch your favorite artist perform, learn to tune a bicycle or play the guitar, tour an English castle, or view a movie trailer. More than 2 billion YouTube videos are viewed every day, and more than 24 hours' worth of video is uploaded every minute. It's free, so join the fun.

Sports

Sports fans will find a lot to love about their Internet-connected HDTV's digital services. Watch out-of-market ballgames on MLB.com, game and tournament highlights and recaps on NBA Game Time, World Cup coverage on SBS (Special Broadcasting Service), or general sports on *USA Today* Sports. Some sports content is free, but some channels require a fee-based membership.

Social Networking

Social networking isn't just for computers anymore. If you're into Twitter, Facebook, or other social networking sites—or if you'd like to learn more about them—you may be able to participate via an Internet-connected HDTV. Post Twitter updates, browse Facebook photos, or share your Flickr albums, all from your television. HDTV-accessible social networking sites are generally free but may require registration.

TV Mounts vs. Stands

Choose The Best Furniture For Your HDTV

When you choose how to display your HDTV, the size and setup of your home-theater room will help you determine if you should get an HDTV stand or mount. To help you select the best option for your home theater, below you'll find what each has to offer.

Set It On A Stand



With a TV stand, you can rearrange your home theater whenever the mood strikes because it can be moved just about anywhere in the room. Many stands have shelves, cabinets, or drawers, which give you a convenient place to set your disc player and game console as well as movies and games. Stands also make it easy to conceal your device's cables because they can hide behind the back of the stand. For those with a smaller home-theater room, it's likely that a TV stand will take up more space than a TV mount and make your room's arrangement feel cramped. Also consider that in some cases it can be a challenge to find a stand that matches your existing home-theater décor.

Mount It To The Wall



HDTV mounts are ideal for anyone who has limited space or a sleek, modern look in their home-theater room. This furniture option will free up floor space because it attaches your HDTV flush against a wall. For added viewing flexibility, some mounts can be moved back and forth, pulled out from the wall, tilted up and down, or all of the above so that you can always see your TV from the best angle. If you decide to use a mount for your HDTV, keep in mind that you might need additional furniture to accommodate your other home-theater components, such as a disc player and media. And because an HDTV is a big investment, you'll want to make sure it's fastened to your wall properly. It's not a bad idea to seek the service of a professional who has the right tools to get the job done safely and correctly.

ESSENTIAL THINGS TO KNOW

A/V Receivers

Q What are an A/V receiver's primary jobs?

A It decodes surround-sound formats, such as Dolby Digital or DTS, so that your speakers can play back the audio in a way that exactly replicates how it was originally recorded. A receiver also offers video inputs and outputs to let you control video and audio sources from one remote.

Q What's the difference between a 5.1 and 7.2 receiver?

A The 5.1 receiver can decode sound to five speakers (two front, one center, and two surround) and one subwoofer. The 7.2 receiver can do the same but it can also decode sound for two more speakers and a second subwoofer and output to another zone for multiroom or outdoor audio capabilities.

Q What types of inputs and outputs should I look for?

A The A/V receiver should offer inputs that match all of your current devices' outputs, such as HDMI or Component. It's a good idea to invest in a model with a few extra HDMI inputs to handle future home-theater add-ons. Similarly, the receiver needs an output that matches one of the inputs on your HDTV.

Q What does the receiver's wattage rating mean in practical terms?

A Generally, the higher a receiver's wattage rating, the better the receiver will be able to reproduce sound with less distortion. The wattage amount you need will depend on room size and layout as well as your volume preference.

Q I want an A/V receiver that supports all of the newest surround-sound formats. What should I look for?

A You'll want support for Dolby TrueHD and Dolby Digital Plus as well as DTS-HD Master Audio and DTS-HD High Resolution Audio.

Q How do I know if my speakers are compatible with the receiver?

A Any speaker with a wattage rating at or above the receiver's per-channel rating will work. Speakers with a lower wattage rating may be compatible, but you risk blowing them out.

Q What is 3D pass-through technology?

A A receiver with 3D pass-through can handle both the input and output of 3D video to your 3D-capable HDTV.

Q Why is video upconversion helpful?

A This feature allows the receiver to scale video quality from lower-quality sources, such as a standard-definition movie, and convert it to the higher resolution of your HDTV.

Q Can I play music from my MP3 player or mobile phone on the receiver?

A It's likely you can. Some receivers include a dock for popular music players or you can connect it via an auxiliary input on the front. To play music from your mobile phone, a number of receivers offer built-in Bluetooth connectivity, so you can pair the phone and receiver.



Yes, You Need To Calibrate

Get Optimal HDTV Video Results

Why A Professional Calibration?

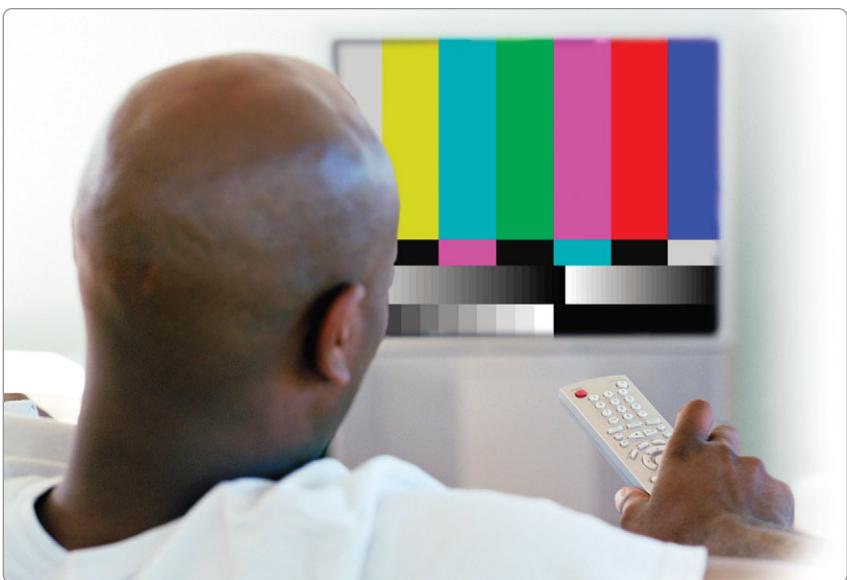
- Calibration specialists are ISF (Imaging Science Foundation)-certified, which means they are trained to use highly specialized and expensive equipment to calibrate HDTVs correctly.
- A calibration DVD might be a tempting alternative, but it won't let you adjust all of your HDTV's settings. An ISF-certified professional can access advanced service menus to calibrate your TV correctly. These settings aren't meant to be experimented with, so if you poke around and gain access to your TV's service menu, it's best to leave it alone. Many people have rendered their TVs useless because they didn't heed this warning.

Your Video May Not Be All That It Seems

- Most TVs are shipped with a set standard video mode meant for an electronics store display—this means that the TV's settings are adjusted to show the best picture in a bright, fluorescent-lit environment. Because it's unlikely your lighting at home matches the store's surroundings, you should have your TV professionally calibrated by a specialist to accommodate your home's unique lighting environment.
- An HDTV's viewing angle and your home-theater setup also affect how your HDTV should be calibrated. An ISF-certified professional takes these factors into account when making adjustments.
- Although you can expect to budget 10 to 15% of the purchase price of your television for a professional calibration, consider it an entertainment investment that will pay dividends for years to come.

What You Can Expect

- A calibration session includes two inputs on the set, so no matter which you use, you will get the best image clarity and sharpness your HDTV can provide.
- A professional will use color analyzer equipment to objectively tune color saturation and temperature as precisely as possible, letting you see video exactly the same way it looked when it was created.
- Your HDTV's contrast will be set up to provide greater video detail as well as the darkest blacks and brightest whites.



HDTVs

Screen Technology Differences



LCD (liquid-crystal display)

LCDs can use one of two backlight technologies. CCFLs (cold cathode fluorescent lamps) are the most common, but LEDs are the latest backlight technology to hit the LCD scene. (See the "LED" section for more info on LED TVs.)

Pros

- The thin profiles and light weight of LCDs make them easy to mount on a wall.
- Power demands are a bit lower than comparably sized plasma displays and considerably lower than CRT televisions.

Cons

- Fast-moving images may suffer from a slight trailer effect, but with improved

LCD technology, the effect is barely perceptible.

- When pixels stick on or off, they show up as either a pinpoint of bright light or black, which can be distracting on-screen.
- From certain viewing angles, LCDs will lose video contrast and color.
- LCDs with CCFL backlighting suffer from leaking light, and unlike LEDs, they can't dim certain areas on-screen. This may result in blacks and whites that appear to be more gray in color.

Best For

- Streaming PC content
- Bright, sunny rooms

LED (light-emitting diode)

LED TVs are actually a type of LCD TV. These sets use one of two LED backlight technologies:

- Full-array lighting places LEDs behind the screen in a grid pattern, letting the TV dim certain LEDs for the best contrast ratios available.
- Edge-lit sets have LEDs placed around the frame of the TV, and light is directed toward the center of the screen. Edge-lit models cost less than full-array sets and are a lot thinner.

Pros

- By using LEDs, these sets use a lot less electricity than other HDTVs, and

they don't contain harmful mercury.

- Overall, LED TVs are one-third thinner than other LCD TVs and have longer life spans.
- Plasmas are well-known for their deep blacks, crisp whites, and fast response times, but LED TVs closely match in performance.

Cons

- These sets are costly because they feature a relatively new technology.
- Blooming, or a halo effect, may encircle bright images that are on dark backgrounds.

Best For

- Eco-conscious viewers
- Fast-paced gaming

Plasma

Pros

- A plasma TV's phosphors light up evenly across the screen to create images, which are consistently bright and clear with vibrant colors.
- The contrast ratio is high, so you'll see some of the darkest blacks and brightest whites.

- The design and technology of plasma TVs lend themselves to large screen sizes—typically 50 inches or greater.
- Rapid pixel response means no blurry motion.
- Wide viewing angles give you the same high-quality images on-screen no matter where in the room you happen to be sitting.

Cons

- Some plasmas are susceptible to image burn-in if not cared for properly.
- Low air pressure and high altitudes may cause plasmas to buzz.
- Some plasmas have highly reflective glass, which isn't ideal in sunny settings.

Best For

- Large groups who watch TV together
- Movies or sports with nonstop action

RPTV (rear-projection TV)

Pros

- RPTVs are surprisingly lightweight for their sizes.
- You'll find exceptional picture quality on very big screens (65 inches and larger).

- As screens get bigger, RPTVs tend to be more cost-effective than an LCD, LED, or plasma TV.

Cons

- With depths of 16 to 24 inches, these TVs are far too big and bulky to mount on a wall.

- RPTVs require lamp replacements every few years.

Best For

- Anyone who wants to bring a cinematic experience home
- Big, roomy home theaters



HDTV Glossary

Balderdash! OK, HDTV jargon isn't quite *that* bad, but there are a few terms that every shopper needs to know. Here is your cheat sheet.

aspect ratio—Put simply, it's the shape of the TV's screen. An HDTV has a wider picture than a traditional TV of the same vertical screen height. An HDTV has a 16:9 aspect ratio, meaning that if its screen were 16 inches wide, it would be 9 inches tall. A regular 4:3 TV screen would be 12 inches wide at the same 9-inch height.

HDMI (High-Definition Multimedia Interface)—A type of cable connection that carries both high-resolution video and uncompressed multichannel audio between HDTVs, home-theater receivers, and the other components required for your home-theater setup. HDMI cables maintain top picture and sound quality.

HD tuner—A built-in tuner for receiving local high-def broadcast TV channels. You won't need one if you have cable or satellite service. Most HDTVs include one, but separate HD tuners and antennas are available if your TV doesn't have one.

interlaced—When an HDTV displays an interlaced image, as in 1080i or 480i resolutions, it really shows you every other horizontal line of a frame of video (called a field) at a time. Sixty times a second, the TV displays the other field of the frame, or the lines not shown in the previous field. Interlaced video can appear to flicker or might cause moving objects on-screen to have blurred edges.

LCD (liquid-crystal display)—Like a notebook's screen, an LCD HDTV uses a fluid crystal substance to form pixels of color in front of a backlight. LCDs may not be able to match plasma TVs' deep black and gray areas, but they're lighter, sometimes less fragile, and considered easier to set up. These work better in brighter rooms or if you will be playing unchanging images on the screen for an extended period of time.

plasma—Plasma TVs use a tiny tube of gas for each pixel, and electricity makes each pixel glow. Plasmas create deeper blacks and sometimes brighter colors than LCDs and have better contrast. These also offer slightly better viewing angles. However, older or less expensive models can also suffer from permanent screen

damage if an unchanging image, such as a TV channel's stock ticker or parts of certain video games, is displayed too long.

progressive scan—A TV showing a progressively scanned image, as in 1080p or 720p resolutions, displays a full frame of video (both odd-lined and even-lined fields) all at once. Progressive scan video looks sharper than interlaced does and doesn't flicker.

projection—Some large-screen HDTVs offer lower-priced alternatives to LCDs or plasmas by using projection technologies. These technologies vary, but all projection TVs throw light on a screen from the front or rear. This means they are bulkier than plasmas or LCDs, but some sets have stellar picture quality.

viewing angle—No matter where you sit in front of an HDTV with a wide viewing angle, such as 170 degrees, its picture should look reasonably good. Test this before you buy.

widescreen—A TV or monitor that's wider horizontally in relation to its vertical height. HDTVs typically have a 16:9 aspect ratio rather than an older 4:3 display.

Should You Get An LCD Or LED-LCD TV?

So you've decided to get an LCD TV. The next step is deciding *which* LCD TV to invest in. LCDs use different kinds of lights to project an image onto the screen. A traditional LCD uses CCFLs or EEFLs whereas new LED-LCDs use LEDs.

	Light projection	Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs & Outputs	Refresh rate**
What It Means	How images are projected on-screen; type of backlight an LED-LCD uses	The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in this	The angle at which the viewer can see the screen clearly	Inputs let you connect devices; Outputs transfer information to peripherals	Speed at which a screen is redrawn every second
	Insignia NS-37L550A11 MSRP: \$629.99* SKU 9602959	CCFL	37 inches	24.6x35.5x9.5 inches; 32.4 pounds (with stand)	1080p	N/A	4 HDMI, 1 Component, 1 Composite, 1 PC; 2 audio outputs
	Panasonic VIERA TC-L42U25 MSRP: \$899.95* SKU 9783658	EEFL	42 inches	25.1x40.2x4.2 inches; 39.7 pounds	1080p	178 degrees	3 HDMI, 1 Component, 2 Composite, 1 PC; 1 audio output
	LG LD520 MSRP: \$1,900* SKU 9797709	CCFL	55 inches	32.9x53.4x4.3 inches; 72.5 pounds	1080p	178 degrees	3 HDMI, 1 Component, 1 Composite, 1 USB; 2 audio outputs
	Samsung LN60C630 MSRP: \$2,499.99* SKU 9904809	CCFL	60 inches	33.3x51.3x3.4 inches; 70.6 pounds	1080p	N/A	4 HDMI, 2 Component, 2 Composite, 2 USB
	Insignia NS-40E560A11 MSRP: \$999.99* SKU 9688972	LED (n/a)	40 inches	25x38.9x1.5 inches; 34.2 pounds	1080p	178 degrees	4 HDMI, 1 Component, 1 Composite; 2 audio outputs
	Samsung UN55C6300SF MSRP: \$2,499.99* SKU 9790851	LED (edge-lit)	55 inches	50.5x30.2x 1.18 inches; N/A	1080p	N/A	4 HDMI, 1 Component, 1 Ethernet, 2 USB; 2 audio outputs
	Sony BRAVIA KDL60EX700 MSRP: \$2,999.99* SKU 9763394	LED (edge-lit)	60 inches	34.6x56.4x 2.6 inches; 60.2 pounds	1080p	178 degrees	4 HDMI, 2 Composite, 1 USB, 1 Ethernet; 1 audio output
	Mitsubishi Unisen Diamond LT-55265 MSRP: \$3,199.98* SKU 9941099	LED (edge-lit)	55 inches	33.3x50.9x3 inches; 65.8 pounds	1080p	N/A	4 HDMI, 2 Component, 1 Ethernet, 1 USB; 1 audio output

See p. 21

*Prices listed in this issue are for general reference and may vary from retailer pricing.
**Unless specified, this is without stand

***Comparing refresh rates between plasma and LCD TVs is like comparing apples to oranges.
For more in-depth information about refresh rates, please ask a sales associate.

Which Plasma TV Is Best For You?

If you're planning on buying a plasma HDTV, it might be hard to decide on one just by looking at a wall of gorgeous sets. Refer to this chart for further help when shopping.

		Size	Dimensions; Weight***	Native resolution	Viewing angle	Inputs	Outputs	Refresh rate**
What It Means		The diagonal measurement of the TV's screen	Height x width x depth; How much the TV weighs	A fixed TV resolution; images are best displayed in the native resolution	The maximum angle at which the viewer can see the screen clearly	Inputs let you connect your components to your TV	Outputs transfer information from your TV to peripherals, such as audio to speakers	Speed at which a screen is redrawn every second
	Insignia NS-42P650A11 MSRP: \$499.99* SKU 9748831	42 inches	27.5x40.6x 11.9 inches; 43 pounds (with stand)	720p	N/A	2 HDMI, 2 Component, 1 Composite	2 audio	600Hz
	Samsung PN42C450 MSRP: \$599.99* SKU 9791253	42 inches	24.8x40.6x2.7 inches; 38.6 pounds	720p	N/A	3 HDMI, 2 Component, 1 Composite, 1 PC	N/A	600Hz
	Insignia NS-50P650A11 MSRP: \$697.99* SKU 9745916	50 inches	31.25x47.37x 11.87 inches; 50.7 pounds	720p	N/A	2 HDMI, 2 Component, 1 Composite	2 audio	600Hz
	Samsung PN50C450 MSRP: \$749.99* SKU 9789725	50 inches	28.5x47.37x 11.25 inches; 51.8 pounds	720p	N/A	3 HDMI, n/a Component, n/a Composite, n/a PC	N/A	600Hz
	Panasonic TC-P42U2 MSRP: \$799.95* SKU 9761059	42 inches	26.1x40.6x3.7 inches; 49.6 pounds	1080p	N/A	3 HDMI, 2 Component, 2 Composite	1 audio	600Hz
	Panasonic TC-P50G20 MSRP: \$1,499.95* SKU 9788953	50 inches	30.3x48x3.5 inches; 57.3 pounds	1080p	N/A	3 HDMI, 2 Composite, 2 Component, 1 PC	1 audio	600Hz
	LG INFINIA 50PK950 MSRP: \$1,699.99* SKU 9720169	50 inches	29x46.9x2.1 inches; 66.6 pounds	1080p	N/A	4 HDMI, 2 Component, 1 PC, 1 USB, 1 LAN	N/A	600Hz
	Samsung PN50C7000 MSRP: \$1,999.99* SKU 9809723	50 inches	29.5x47.7x1.4 inches; 54 pounds	1080p	N/A	4 HDMI, 2 Component, 1 Composite, 1 PC, 1 USB	N/A	600Hz

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**Unless specified, this is without stand

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LED-LCD TV

High-Quality Video & Sound United



Mitsubishi Diamond 265 Immersive Sound LED TV

MSRP: 46-inch model
(LT-46265) \$2,499
SKU: 9941071

MSRP: 55-inch model
(LT-55265) \$3,199
SKU: 9941099

www.mitsubishi-tv.com

Quick Overview

Mitsubishi's 55-inch LT-55265 LED TV has a 1080p video resolution that's complemented by a 240Hz refresh rate. An 18-speaker Dolby Digital 5.1 surround-sound system is integrated into the TV to offer a complete home-theater audio setup without purchasing individual components. And with access to StreamTV Internet Media, this HDTV gives you access to plenty of entertainment and social media content.

Perfect For

Anyone who wants an all-in-one HDTV solution that offers not only a great-looking picture but also enveloping surround-sound audio.

Outstanding Benefits

- Thanks to the edge-lit LED backlight, this TV has an ultra-thin profile and uses less energy than CCFL backlit TVs
- Immersive Sound Technology uses 18 integrated speakers to produce a 5.1 surround-sound experience
- Four HDMI ports to connect HD-capable entertainment devices
- Bluetooth audio streaming lets you enjoy music tracks on your TV from any Bluetooth-compatible device, such as an iPhone or BlackBerry
- Built-in 802.11n wireless connectivity allows you to stream movies, photos, and more to the TV

Coolest Feature

Without the clutter of separate home-theater components, the LT-55265's integrated 18-speaker Dolby Digital 5.1 surround-sound system makes it an optimal blend of 1080p video and immersive sound technology.

NOTEWORTHY

Accessories & Services



WALL MOUNTS & BRACKETS

- View your HDTV from the best possible angle
- Adjust your TV's position by tilting it up or down as needed
- Maximize space in your viewing room by hanging up your TV



CLEANING KIT

- Protect your HDTV's screen by using specially formulated sprays and cloths while cleaning it
- Eliminate the danger of scratching delicate screens
- No-drip formulas prevent damage to other home-theater equipment



CORD-CONCEALMENT KIT

- Hide multiple cords while keeping them organized
- Minimize cord clutter, especially with wall-mounted sets
- Keep the focus on your new HDTV, not the cords connected to it



TV STANDS

- Offer flexibility if you're unable to mount your HDTV on the wall
- Available in a variety of finishes to match any décor
- Provide a place for additional home-theater equipment



HDMI CABLES

- Carry uncompressed digital audio and video signals to and from your HDTV and its components
- Eliminate interference from other components with shielding (found in higher-end cables)

As you head toward the HDTV section of your local consumer electronics store, you'll invariably pass shelves of bland-looking HDTV accessories. There are a handful of accessories that are vital to getting the most from your HDTV. The following is a rundown of the accessories we recommend to complete your home-theater setup.



UNIVERSAL REMOTE CONTROL

- Simplify your home-theater setup with one remote that can control all of your components
- Program different functions so that you will be able to watch a movie by pressing just one button, for example
- Easily view options in the dark with a backlit LCD



SURROUND-SOUND SYSTEM

- Maximize your HDTV experience with theater-like audio
- Feel like you're in the movie scene instead of just watching it
- Even out softer and louder programming with an equalizer



SURGE PROTECTORS/POWER CONDITIONERS

- Protect your home theater from potential damage by using a surge protector that will absorb electrical fluctuations
- Filter out "dirty power" (also known as electrical "noise" or radio interference) that can degrade your home theater's audio and video with a power conditioner
- Have peace of mind knowing that your home theater will give you its peak performance for the longest amount of time



HOME-THEATER SERVICES

A home theater is a pretty big investment, so it's wise to consider letting a professional handle your installation and setup. Let your local CE retailer tackle the following tasks, and you'll be able to enjoy the full glory of HD in no time.

- Home Theater In-Home Consultation
- TV Recycling
- TV Calibration
- TV Mounting & Cord Concealment
- Remote Control Programming
- Speaker Setup



Where Small Size & Big Features Meet

Canon PowerShot SD4500 IS Digital Camera

Style and substance don't have to be mutually exclusive: The Canon PowerShot SD4500 IS (\$349.99; www.powershot.com) is an example of how efficiently these two characteristics can complement each other. As of August 2010, the SD4500 IS is the smallest camera with 10x optical zoom on the market. At less than an inch thick, the SD4500 IS camera is portable, yet powerful enough to capture your best shots.

High-Definition Video

The SD4500 IS is just as capable of capturing video as it is photographs. The Full HD (1,920 x 1,080 pixels) video mode will record your family events in HD at 24fps. Shooting video is also easy, thanks to a dedicated video button. Use the mini-HDMI output to connect the camera to your HDTV to view photos and HD video on the big screen.

Full-Featured Functions

When it comes to sophisticated camera functionality, the SD4500 IS doesn't disappoint. The Advanced Smart AUTO feature automatically detects 28 different shooting scenes, so you can simply point and shoot without having to change any camera settings. Also, if you plan to snap photos of your daughter playing fast-pitch softball, take advantage of the High-Speed Burst mode that allows up to 8.4 consecutive shots. Two more features on this model, Best Image Selection and Handheld Night Scene, give you flexibility when shooting photos.

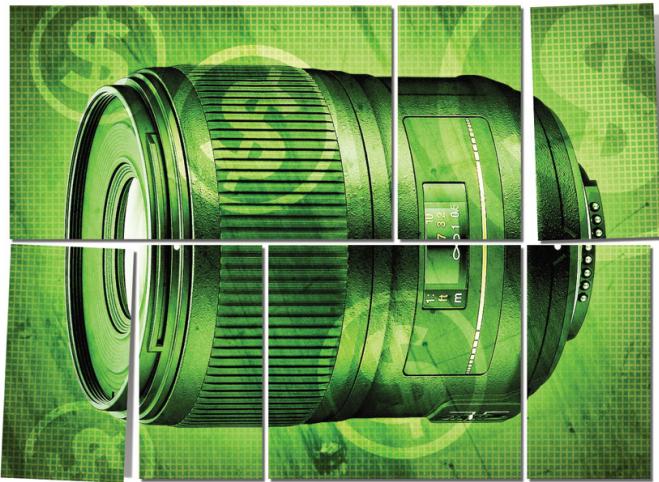
Canon's HS System

One feature that can make a huge difference in your image quality is Canon's HS System, which is made up of a 10MP CMOS image sensor and the DIGIC 4 Image Processor. The HS System works to give you beautiful, sharp photos with minimal noise and natural colors even in low light. It also helps prevent blurring in your photos.

HOW TO BUY A

D-SLR Lens

A Lens For Every Task



Different camera lenses are appropriate for different types of shooting, and the fact that your D-SLR allows you to switch easily from one to another is a huge advantage. But which lens—or lenses—should you buy? That depends on your goals.

Normal, everyday shooting. If your D-SLR comes with a lens, it is often a short-range zoom with a focal length that varies from roughly 18 to 55mm or so. While not allowing for either long-distance photos or extreme close-ups, this lens is excellent for a wide variety of photos, from posed portraits to candid vacation shots. If your camera does not come with a lens, this would be a good choice as an everyday lens.

Long-distance shooting. Whether it's shooting a goalie across a soccer field or a bird on a limb across a meadow, a long-range zoom can bring the action up close and allow you to fill the frame with your subject. The focal lengths on these lenses vary from 70 to 200mm or more.

Close-ups and wide-angle shots. If you're after extreme close-ups of insects, jewelry, or other small subjects, consider a macro lens, one specially designed to allow you to focus from within a few inches of your subject. Alternatively, if you are shooting large groups of people that might be difficult to fit into a frame, try a wide-angle lens; these are very short focal length lenses (sometimes less than 20mm) with an extremely wide field of view.

... consider a macro lens, one specially designed to allow you to focus from within a few inches ...

Portraits and repetitive work. Most D-SLR lenses are zooms—the photographer changes the focal length of the lens by twisting a ring on the lens barrel. This makes it easy to switch from, say, a moderate close-up across a table to a longer shot across the room. Fixed focal length lenses, whose focal length cannot change, are lighter, smaller, and more sensitive to light. Consider these for portraits or other work that involves taking many photos at the same focal length.

Fixed focal length lenses, whose focal length cannot change, are lighter, smaller, and more sensitive to light.

BY ROD SCHER

Small Size, Big Bite

The World's Smallest Camera With Interchangeable Lenses

"It's not the size of the dog in the fight; it's the size of the fight in the dog." Mark Twain wasn't referring to Sony's NEX-3 digicam (\$599.99; www.sony.com) when he uttered those words, but they sure do apply. Packing D-SLR-like performance in a body roughly half the size and weight, the NEX-3 looms large as the world's smallest interchangeable lens digicam (as of April 2010).

The Switch Is On

Measuring only 2.5x4.625x1.375 inches (HxWxD), the NEX-3 shoots 14.2MP images and 720p HD video while adapting to various shooting situations by letting you switch among dedicated E-mount lenses and nearly 30 A-mount lenses (using an optional LA-EA1 Mount Adapter). The tilting, nearly 1MP 3-inch TruBlack LCD, meanwhile, frames shots with 100% what-you-see-is-what-you-get accuracy.

Enter Sony's "3D World"

With a recently released firmware upgrade, the NEX-3's shooting prowess now expands to capturing 3D photos viewable on 3DTVs using 3D eyewear (both sold separately). The upgrade also extends the NEX-3's battery life. Thus, even if 3D remains in your future, getting more shots from the battery doesn't have to.



Sony NEX-3
\$599.99
www.sony.com

Sharp Specs

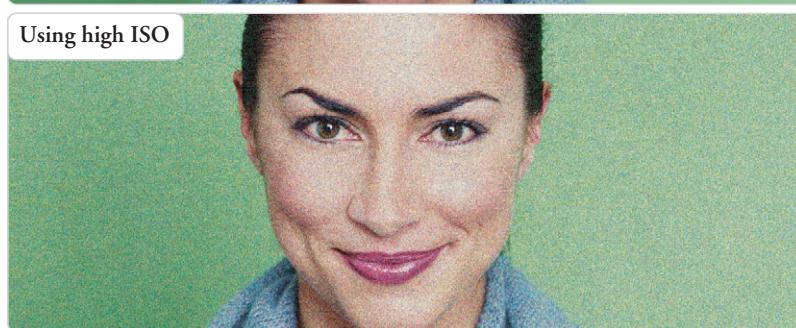
- 14.2MP and 720p HD video
- Continuous Auto-Focus and Auto-Exposure while recording video, plus HDMI output.
- iAUTO, Program, Aperture Priority, Shutter Priority, and Manual modes
- Sweep Panorama and 3D Panorama modes
- Anti Motion Blur and Handheld Twilight modes
- Intelligent Auto Focus
- 7fps continuous shooting
- Face Detection and Smile Shutter
- Manual Focus Assist
- Dual media card slots (MS PRO Duo/PRO-HG Duo/SD/SDHC)

Excellence With Ease

Sony combines its BIONZ image processor in the NEX-3 with the same Exmor APS-C HD image sensor it uses in its full-sized D-SLR models (offering 13x the typical image sensor area). The result is super accurate photos processed extremely fast with less noise—even when shooting in low-light settings. As Sony states, you're getting photographs vs. snapshots. Additionally, a purposefully simple Control Wheel + Soft Keys design means less confusion enabling such features as Background Defocus Control, which defocuses backgrounds to make a photo's primary subject jump out. Further, on-screen help and shooting tip guides offer explanations when needed.

All About ISO

Get The Shot You Want, Regardless Of The Available Light



ISO is one of the less self-explanatory settings on a digital camera. Fortunately, it's a simple concept to grasp. It's actually a carryover from the film era, a number that once described a film's sensitivity to light. In digital cameras, the ISO setting determines the light sensitivity of the image sensor.

The Basics Of ISO

ISO usually begins at a low of between 50 and 100 or as high as 200 in some cameras. The upper limit varies in a much wider range between cameras: often 1600, 3200, and 6400.

- Whereas film had a fixed ISO, with digital cameras, you can adjust the ISO from one shot to another.
- The more compact a camera is, the smaller its image sensor is. Thus, it's likely to be less forgiving of high ISO settings, and your photos may contain noise, otherwise known as a grainy quality or random speckles of color.
- D-SLRs perform much better overall in low-light situations. Some high-end models shoot remarkably clean photos even at extremely high ISO settings.

How To Use ISO

- The lower you set a camera's ISO, the less light sensitive the image sensor is. The higher you set it, the more sensitive the sensor becomes.
- A higher ISO allows for faster shutter speeds. This lets you shoot handheld photos in low-light situations that might otherwise require a tripod or where using a flash may not be practical or allowed.
- There's often a tradeoff to using high ISO settings. A camera's lowest ISO will capture the clearest, cleanest photos the camera can take. When you use higher ISOs, it's more likely your pictures will show noise.
- Using Auto ISO can sometimes help you determine the camera's optimum exposure when you use a camera's other semi-automated features, such as aperture priority shooting. However, serious photographers prefer manual ISO, so they can control the degree of noise.

BY BRIAN HODGE

Better Shots Are In The Cards

Upgrade Your Camera With SanDisk Ultra

Don't blame your camera. If you're missing follow-up shots or if you can't shoot video in HD resolutions, it's probably because your memory card is too slow.

SanDisk's (www.sandisk.com) Ultra line of flash memory cards is specifically designed for today's powerful point-and-shoots. These cards are fast enough and big enough for the demands of digicams with 10, 12, or more megapixels. Compared to standard memory cards, a SanDisk Ultra is a drop-in upgrade to soup up your camera because it offers more speed, reliability, and durability.

Speed Rating

The MBps (megabytes per second) rating of an Ultra card indicates that it will take less time to upload your photos and video clips to a computer than it would with a standard memory card. You'll also be able to thumb through previews of your images on-camera much faster.

Class Rating

The Class logo tells you how fast an Ultra card is guaranteed to store your photos and video. This card does that at a minimum of 4MBps. That's speedy enough to allow your camera to shoot uninterrupted 720p HD video. It also means that you'll be able to take quicker follow-up pics than with a standard card.



<input checked="" type="checkbox"/> WATER PROOF	<input checked="" type="checkbox"/> HUMIDITY PROOF
<input checked="" type="checkbox"/> TEMPERATURE PROOF	<input checked="" type="checkbox"/> TEMPERATURE PROOF
<input checked="" type="checkbox"/> SHOCK PROOF	<input checked="" type="checkbox"/> SHOCK PROOF
<input checked="" type="checkbox"/> X-RAY PROOF	<input checked="" type="checkbox"/> X-RAY PROOF

Reliability

SanDisk Ultra cards have a reputation not only for being physically tough, but also trustworthy with your data. That's an important point when you consider that a memory card carries the only copies of your photos and videos until you get a chance to transfer them. SanDisk is confident enough in the Ultra line's resilience to back it with a lifetime limited warranty.

Capacity

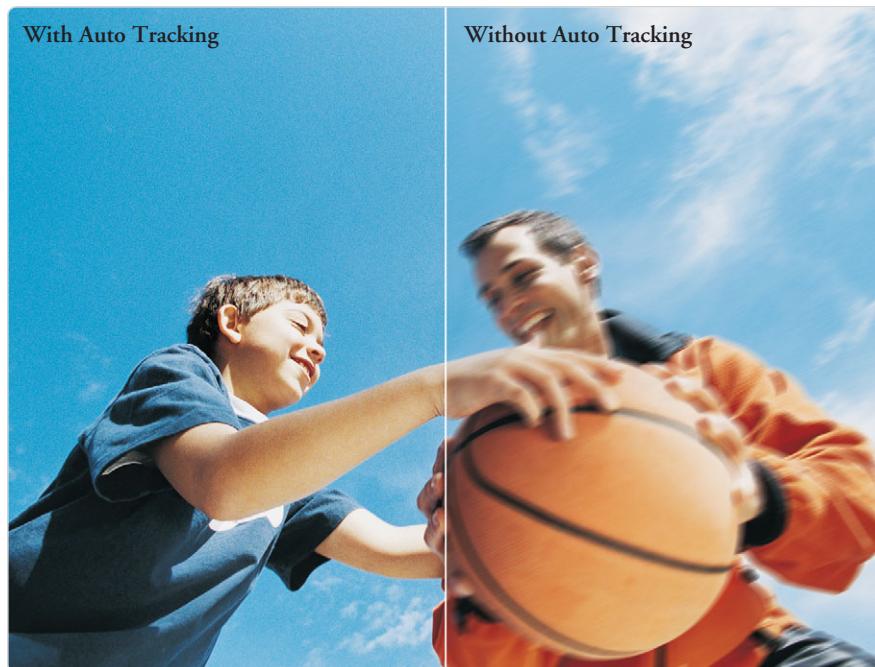
The higher your resolution, the larger the image or video files. SanDisk's Ultra cards come in capacities that can easily cope with HD video and high-res photos. You can buy Ultra SD, SDHC, and Memory Stick Pro Duo cards up to 32GB in size, and Ultra CompactFlash cards with up to 16GB of storage.

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*SD and SDHC card formats up to 32GB only; See www.sandisk.com/proof for additional information

The Key To Great Action Photos

A Camera With AF Tracking



Photographing people in action isn't easy. Their movement makes it difficult for your camera's autofocus to set a focal point where your subject is in crisp focus. To make it easier to capture action shots, a number of cameras offer an AF (autofocus) tracking mode. This lets the camera monitor movement and use an algorithm to predict the appropriate focus point of moving subjects.

How To Use AF Tracking

- Set the camera to its autofocus tracking mode. Camera brands title the feature differently, such as AF Tracking, 3D Focus Tracking, or AI Servo AF.
- Press the shutter button about halfway down and follow your subject for a few seconds. This gives the camera an idea of what your subject's direction and speed will be and increases the likelihood that it can predict a focal point that will keep your subject in relatively sharp focus.
- Press the shutter button all the way down to capture the action.

Ideal Situations For AF Tracking

- When you want your child to be in focus more than the rest of the players in close-up sports shots.
- When you need to photograph people in or on moving objects, such as a car or bicycle, or capture flying objects, such as a football or soccer ball.
- When a subject may change direction at a high speed, such as when you're snapping shots of a dog playing in the backyard.

Test A Camera's AF Tracking

- To determine which camera with autofocus tracking is the best fit for you, try taking some photos in the store using the feature. You can compare models' AF tracking capabilities by following moving objects, such as by tracking someone's hand as it moves closer and farther away. Ideally, they'll need to be more than a foot away, so you can be sure their hand is outside the camera's minimum focus range.

BY NATHAN LAKE

ESSENTIAL THINGS TO KNOW

Memory Cards

Q How do I know what type of memory card to buy?

A Although many cameras and camcorders can use the same types of memory cards, you'll need to check your device's users manual to determine which type it's compatible with.

Q What do class ratings mean?

A Class ratings are listed on SD cards as a number inside of a circle. This spec indicates the minimum number of megabytes that can be transferred when you record video. The higher the class number, the faster your camera can write video data to the card. Currently, you'll find Class 2 (2Mbps), 4 (4Mbps), 6 (6Mbps), or 10 (10Mbps).

Q What does a memory card's read/write speed mean?

A A card's read/write speed, such as 30Mbps, tells you how quickly a card can save and access data. With a faster read/write speed, you'll notice less lag time when shooting photos in succession and transferring images from the card to your computer.

Q What capacity should my memory card be?

A The capacity you'll need depends on the number of photos you take, your camera's megapixel count, and the size of each photo. Typically, a 2 to 4GB memory card is sufficient if you plan to frequently offload your photo files to your computer, though having extra storage space never hurts.

Q When do I need a high-capacity memory card?

A If you plan to shoot HD video, D-SLR photos, or thousands of images from a point-and-shoot, you should look for a card with at least 8GB.

Q How many memory cards do I need?

A It's a good idea to have more than one memory card. If you misplace or damage one card, you won't lose all of your captured memories.

Q Do I need a particular type of memory card type to record HD video?

A To properly handle the high speed and capacity demands of HD video, you should look for a memory card that has a large amount of storage, high class rating, and fast read/write speed.

Q What new and advanced features are available on memory cards for digicams and video cameras?

A Some cards have Wi-Fi capabilities, which let you upload images to your PC or an online sharing site over a wireless network. Others have a durable construction, letting them withstand accidental drops and extreme temperatures.

Q Can I use one memory card type for my camera and camcorder?

A Not always. While some cameras and camcorders use the same type of memory card, others may require different memory cards altogether.





Digital Imaging Glossary

Are you confused about what the lingo on camera boxes means? Use this glossary to help decode the world of digital imaging.

aperture—An iris-like diaphragm opening that can expand and contract the lens to let you control the amount of light that passes through it, thus affecting the exposure. The term “f-stop” can be used interchangeably with aperture.

burst mode—A camera mode that will let you capture several shots consecutively after pressing the shutter only one time.

CCD—A charge-coupled device is a type of image-sensing component. It converts light into energy that can be stored as digital data on your camera.

depth of field—The area that is in focus in front of and beyond the subject of your photo.

digital zoom—Magnifies an image digitally by cropping it and filling in the rest with interpolated pixels, thus degrading the quality. Even if the numbers are impressive, never choose a camera based on digital zoom.

f-stop—See aperture. Smaller f-stop numbers mean a wider lens opening; larger f-stop numbers mean a narrower lens opening.

ISO—For digital cameras, the ISO setting measures the sensitivity to light (similar to how it does with film). Digital camera ISO settings, such as 200, 400, and up, should capture photos as if one were using film with such a speed. Lower ISO settings mean you need more light and vice versa.

LCD—The screen on the back of the camera that lets you see a live-action view of your subject or your photo after you've taken it.

lens—The apparatus on the front of the camera that gathers and directs light toward the imaging device. In a digital camera, the lens likely has both an optical and digital zoom.

megapixel—Approximately 1 million pixels. The higher the megapixel count, the higher the resolution and the more you can crop, which means (in general) better-quality photos.

memory card—Because digital cameras have very little onboard memory, they need flash memory cards to store more than a dozen or so images. The type of memory card you need depends on the make and model of your camera. Some of the most popular memory cards are Secure Digital, MultiMedia Card, Compact Flash, and Sony Memory Sticks. In general, memory cards are quite small.

noise—The small statistical variations among pixels that lead to (usually) minor distortions of color in a photo.

optical zoom—The camera's mechanical ability to move the lens physically closer to your subject. With optical zoom, the higher the number (such as 5X or 10X), the better. When choosing a camera, always consider the optical zoom, not the digital zoom. Digital zoom artificially adds pixels.

resolution—The number of pixels in an image. The higher the resolution, the more detail and quality in a photo. Resolution is measured in a proportion (such as 2,272 x 1,704).

shutter—A mechanism that opens and closes to allow light to pass through the lens. You can usually control the camera's shutter speed.

shutter speed—The length of time a camera's shutter is open to let light through the lens and hit the sensor, which records the image. This is expressed in fractions of a second: For instance, a shutter speed of 1/250 means that the shutter is open for 1/250th of a second.

viewfinder—The small opening in the camera that the user looks through to frame a shot. Some digital cameras don't have a viewfinder and use only the camera's LCD to frame the shot.

white balance—Light levels are adjusted electronically to ensure whites in a certain environment are pure, leading to more life-like colors. White balance can usually be manually adjusted, too.

Which Point-&-Shoot Camera Is Best For You?

If you're a little confused about the most important features in a digital camera, you're not alone. In this chart, we compare features from select digital cameras, and we also explain what these features mean.

	Resolution; Optical zoom	Shutter speed	Memory card	LCD size	Battery life	ISO	Movie mode	
What It Means		More pixels mean bigger and clearer prints; Moves the lens closer to your subject	A faster shutter speed will let you snap action photos without blur	Removable card that stores your photos in your camera	The LCD is the screen on the back of the camera	Based on how many shots you can take on a single charge	A higher ISO lets you take better photos in low-light settings	Lets you record short video clips on your digital camera
	Kodak Easyshare M530 MSRP: \$129.95* SKU 9765189	12.2MP; 3X	1/8 to 1/4,000 second	SD/SDHC	2.7 inches	N/A	Auto; Manual: 80, 100, 200, 400, 800, 1000	Yes
	Sony Cyber-shot W370 MSRP: \$199.99* SKU 9757839	14.1MP; 7X	2 to 1/1,600 seconds	Memory Stick Duo/PRO Duo/PRO HG-Duo/SD/SDHC	3 inches	230 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600, 3200	Yes
	Fujifilm FinePix Z700EXR MSRP: \$279.95* SKU 1004713	12MP; 5X	4 to 1/1,000 seconds	SD/SDHC	3.5 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200	Yes
	Nikon Coolpix S8000 MSRP: \$299.95* SKU 9758674	14.2MP; 10X	1 to 1/2,000 second	SD/SDHC	3 inches	210 shots	Auto; Manual: 100, 200, 400, 800, 1600, 3200	Yes
	Olympus Stylus TOUGH-6020 MSRP: \$299.99* SKU 9765213	14MP; 5X	1/4 to 1/2,000 second	SD/SDHC	2.7 inches	200 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Panasonic ZS7 MSRP: \$399.95* SKU 9984124	12.1MP; 12X	60 to 1/2,000 seconds	SD/SDHC/SDXC	3 inches	300 shots	Auto; Manual: 80, 100, 200, 400, 800, 1600	Yes
	Canon PowerShot SD4500 IS MSRP: \$349.99* SKU 1218465	10MP; 10X	1 to 1/4,000 second	SD/SDHC/SDXC/MMC/MMC Plus/HC MMC Plus	3 inches	150 shots	Auto; Manual: 125, 200, 400, 800, 1600, 3200	Yes
	Fujifilm FinePix HS10 MSRP: \$499.95* SKU 1004868	10.3MP; 30X	1/4 to 1/4,000 second	SD/SDHC	3 inches	N/A	Auto; Manual: 100, 200, 400, 800, 1600, 3200, 6400	Yes

*Prices listed in this issue are for general reference and may vary from retailer pricing.

See p. 23

Which D-SLR Is Best For You?

As D-SLR prices keep coming down, more photographers are turning to them, both as a first camera and as a trade-up to something better. In this chart, we'll help you sort through some of the features and performance specs of select D-SLR cameras.

		Resolution	LCD size	ISO range	Kit lens	Burst speed	Shutter speed
What It Means		Image sensor in megapixels; more means a bigger image	Diagonal measurement of the screen on the back of the camera	A higher ISO range will let you take better photos in low-light situations	Standard lens bundled with the camera body	Frames per second (fps) you can shoot while in burst mode	The wider the range, the greater the gamut of long exposures to frozen action
	Olympus PEN E-PL1 MSRP: \$599.99* SKU 9769158	12.3MP	2.7 inches	200 to 3200	14-42mm f/3.5-5.6	3fps	60 to 1/2,000 seconds
	Sony NEX-3 MSRP: \$599.99* SKU 1034438	14.2MP	3 inches	200 to 12800	18-55mm f/3.5-5.6	7fps	30 to 1/4,000 seconds
	Nikon D3000 MSRP: \$549.95* SKU 9456803	10.2MP	3 inches	100 to 1600	18-55mm f/3.5-5.6	3fps	30 to 1/4,000 seconds
	Pentax K-X MSRP: \$649.95* SKU 9555787	12.4MP	2.7 inches	200 to 6400	18-55mm f/3.5-5.6	4.7fps	30 to 1/6,000 seconds
	Canon EOS Rebel T2i MSRP: \$899.99* SKU 9778635	18MP	3 inches	100 to 6400	18-55mm f/3.5-5.6	3.7fps	30 to 1/4,000 seconds
	Olympus E-3 MSRP: \$1,299.99* SKU 8682776	10.1MP	2.5 inches	100 to 3200	N/A (body only)	5fps	60 to 1/8,000 seconds
	Canon EOS 7D MSRP: \$1,699* SKU 9491944	18MP	3 inches	100 to 6400	N/A (body only)	8fps	30 to 1/8,000 seconds
	Nikon D300s MSRP: \$1,699.95* SKU 9457349	12.3MP	3 inches	200 to 3200	N/A (body only)	7fps	30 to 1/8,000 seconds

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Digital Camcorder Is Best For You?

Digital camcorders come in a number of formats: DVD, hard drive, flash drive, MiniDV, and high definition are the most common. By comparing the following digital camcorders, you can determine which recording format and product best fit your style.

		LCD size	Optical zoom; Digital zoom	Recording speeds	Memory card	Digital still resolution	Lines of resolution	
What It Means		Diagonal length of viewing screen	Two methods for magnifying depth of field; optical zoom is better	The speeds a particular camcorder can utilize during recording	Compatible flash card types (cards not included unless noted)	The number of megapixels the camcorder can capture in still images	Number of lines of horizontal resolution; the higher the number, the greater the detail	
High-Definition		JVC Everio GZ-MS230 MSRP: \$269.95* SKU 9731192	2.7 inches	39X; 800X	Ultra/Fine/ Norm/Eco	SD/SDHC	0.3MP	480
		Canon FS300 MSRP: \$299.99* SKU 9739361	2.7 inches	37X; 2,000X	XP/SP/LP	SD	0.45MP	480
		Insignia NS-DV111080F MSRP: \$349.99* SKU 9769398	3 inches	12X; 10X	N/A	SD/SDHC	10MP	1,080
		Samsung HMX-H205BN MSRP: \$599.99* SKU 9879545	2.7 inches	20X; 220X	N/A	SDHC	4.7MP	1,080
		Canon VIXIA HF R11 MSRP: \$699.99* SKU 9751699	2.7 inches	20X; 400X	FXP/XP+/ SP/LP	SD/SDHC	1.73MP	1,080
		Samsung HMX-S10BN MSRP: \$799.99* SKU 1021531	3.5 inches	15X; 180X	N/A	SD/SDHC	5MP	1,080
		Panasonic HDC-HS60K MSRP: \$699.95* SKU 9921715	2.7 inches	25X; 60X	HA/HG/HX/HE	SD/SDHC/ SDXC	5MP	1,080
		Sony Handycam DCR-SR88 MSRP: \$399.99* SKU 9880262	2.7 inches	60X; 2,000X	HQ/SP/LP	Memory Stick PRO Duo/SD/ SDHC	N/A	480

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Find The Nikon COOLPIX That Fits Your Life

Nikon's COOLPIX cameras won't let you miss the joy in life, thanks to their fast start-up time, shutter speed, and auto focus. Each COOLPIX offers an ultra-compact and stylish design that will deliver sharp and colorful photo results with its NIKKOR lens. With a wide range of Nikon COOLPIX cameras available, it couldn't be easier to find a camera that can keep up with your photography needs.



At the heart of the Image™

Product Name	Nikon COOLPIX L22	Nikon COOLPIX L110	Nikon COOLPIX S570	Nikon COOLPIX S3000	Nikon COOLPIX S8000	Nikon COOLPIX S4000	Nikon COOLPIX S70	Nikon COOLPIX P100
SKU	9765091	9758692	9455369	9765107	9758674	9758647	9455412	9758747
Additional Colors Available			 9464661 9765125 9765143 9765134			 9765161 9765152 9779807	 9463662 9630449 9630389	
MSRP*	\$129.95	\$279.95	\$179.95	\$149.95	\$299.95	\$179.95	\$299.95	\$399.95
Resolution	12MP	12.1MP	12MP	12MP	14.2MP	12MP	12.1MP	10.3MP
Zoom	3.6X optical; 4X digital	15X optical; 4X digital	5X optical; 4X digital	4X optical; 4X digital	10X optical; 2X digital	4X optical; 4X digital	5X optical; 4X digital	26X optical; 4X digital
LCD Monitor	3 inches	3 inches	2.7 inches	2.7 inches	3 inches	3 inches	3.5-inch OLED	3-inch tilt and swivel LCD
Internal Memory & Compatible Cards	19MB internal & SD/SDHC	43MB internal & SD/SDHC	47MB internal & SD/SDHC	47MB internal & SD/SDHC	32MB internal & SD/SDHC	45MB internal & SD/SDHC	20MB internal & SD/SDHC	43MB internal & SD/SDHC
ISO	Up to 1600	Up to 6400	Up to 3200	Up to 3200	Up to 3200	Up to 3200	Up to 6400	Up to 3200
Shooting Modes	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 15 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	6 Scene Auto Selector Modes, 16 Scene Modes, plus Auto	17 Scene Modes; Program, Aperture Priority, Shutter Priority, and Manual Exposure Modes
Movie Mode	Yes	Yes (HD)	Yes	Yes	Yes (HD)	Yes (HD)	Yes (HD)	Yes (HD)
Touch-Panel Control	No	No	No	No	No	Yes	Yes	No
Battery Type	2 AA batteries	4 AA batteries	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery	Li-Ion rechargeable battery
Battery Life	240 shots with alkaline, 660 shots with lithium-ion	270 shots with alkaline, 840 shots with lithium-ion	200 shots	220 shots	210 shots	190 shots	200 shots	250 shots

* Prices listed in this issue are for general reference and may vary from retailer pricing.

NOTEWORTHY

Accessories & Services

**UV FILTER**

- Protects digital camcorder and D-SLR lenses from dust, dirt, fingerprints, and scratches
- Helps you get clearer, more detailed results when you're shooting in bright conditions

**EXTRA MEDIA**

- Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space
- Consider having several memory cards with smaller capacities instead of one card with a larger capacity; that way, if something goes wrong with one card, you'll still have a backup
- For your digital camcorder, keep more recording media in your bag than you think you'll need, just in case

**ADDITIONAL LENSES/CONVERTER LENSES**

- Extra lenses for D-SLRs and converter lenses for digital camcorders can enhance your results by extending your field of view, reducing glare, and more
- Telephoto lenses enable you to zoom in from far away, wide-angle lenses give you the ability to get a full view even if you're close to the subject, and macro lenses will let you achieve up-close, detailed shots of your photo subject

**EXTERNAL FLASH**

- Light up your subjects from greater distances
- Offers better control of lighting conditions when taking photos by directing the angle of the flash

**SPARE BATTERIES & CHARGERS**

- Make sure you're never caught without the power needed to capture the perfect moment
- Whether your camera uses proprietary batteries or AAs, keep at least one fully charged spare or set in your camera bag
- An additional battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're traveling

**TRIPOD**

- Tripods are an easy way to ensure steady video footage
- Pan while recording video in one smooth motion
- Use a tripod and your camera's timer to get a picture of the entire group without needing someone to man the camera
- Keeps your camera steady while you're shooting close-up or distance shots, which can prevent photo blurring

**REMOTE SWITCH**

- A longer cable lets you snap photos without having to touch the camera, which can also reduce camera shake
- May enable the user to lock the shutter for longer exposure times

**DIGITAL IMAGING SERVICES**

Once you've set your sights on the camera or camcorder you want, consider taking advantage of the digital imaging services offered by your local CE retailer. Not only can you protect your investment, but you can also discover photography and videography skills that will make your photos and videos picture-perfect.

- D-SLR or Camcorder Service Plan
- D-SLR Training Course
- Camcorder Training Course

Kaspersky Internet Security 2011

Smart, Innovative Protection

Kaspersky Internet Security 2011
\$79.95; www.kaspersky.com



Kaspersky Lab continues to innovate by ensuring its products not only protect your computer but also offer performance and ease of use. As a prime example, Kaspersky Internet Security 2011 (\$79.95; www.kaspersky.com) uses unique and advanced technologies to prevent and block online threats before they can do any harm. Here's a look at some of the notable new features the 2011 version has to offer.

Safe Run

Safe Run* provides an added layer of protection for running suspicious or unknown programs, emails, and web sites. The Safe Run environment is completely walled off from your data and PC settings, so you can be confident that no harm will come to your system. New for 2011, you can set the Safe Run mode to engage automatically when you visit banking sites or other web sites to ensure an added layer of security for your confidential information.

Advanced Parental Controls

To keep your kids safe and responsible, the new Advanced Parental Controls can monitor, block, and/or limit communications via email, IM, and social networks. It can also prevent access to applications, games, and web sites as well as the transfer of private data, such as phone and credit card numbers. This not only stops inappropriate content from being seen by your family, but it also stops private information from going out.

Desktop Security Gadget

A new and easy-to-use Windows gadget offers instant access to your security software. By looking at the gadget, you can quickly check your system's security status. It also offers customizable one-click buttons so you can quickly launch frequently used features, such as Reports and Parental Controls. If you want to check the safety of a file, you can simply drag and drop that file to the gadget to perform a security assessment.

Severely Infected PCs

If your PC has already been infected, it's not too late to use Kaspersky Internet Security 2011. To eliminate all infections on your PC, the software can automatically download a powerful clean-up tool. This lets you quickly and easily install the product, ensuring your computer isn't crippled by malware again.

* Available on 32-bit operating systems

HOW TO BUY A

Netbook

Small But Mighty



Netbooks, small notebook-type PCs with limited storage and memory as well as low-voltage processors, may look under-powered, but don't let that fool you. These little power-houses can pack a punch; often, an inexpensive netbook is all you need to get the job done. There are plenty of them out there; we'll help you select the right one based on your favorite activities.

Hard drive space. What's important to netbook-using music, photo, or video fans is storage space: Get as much as possible—160GB minimum, 250GB if you can manage it. Usually this means going for a model that

has a hard drive, such as the Dell Inspiron Mini 10 Netbook (\$449.99; www.dell.com),

rather than a solid-state storage device. The former gives you more storage for the money, but at the expense of speed.

... storage space:
Get as much as
possible . . .

Processor. If you're a dedicated blog-hopper or Web crawler, a netbook will more than do the job for you. Running a browser requires little in the way of storage, memory, or processing power, so a standard netbook with a cool, low-voltage processor will provide all the Web-surfing power you need. There's normally plenty of power for viewing local or streamed video, too, although actually creating and editing videos may tax a netbook's processing power.

Memory. Word processors and spreadsheets are quite large and sophisticated, so they require some memory; go for the most you can manage. For some netbooks, that's 1GB, but many are expandable to 2GB. With more memory, your apps will run better . . .

Ports. Netbooks are small and portable, but they include a variety of ports that can be used to connect a number of external peripherals. Most netbooks will

offer multiple USB ports, a VGA and/or digital video connector, an Ethernet jack, flash memory readers, and other expandability options that allow you to add CD or DVD players, full-sized monitors and keyboards, and other such devices.

With more memory,
your apps will run
better . . .

Most netbooks will
offer multiple USB
ports . . .

A Look At Router Protocols

Similar But Different



Routers are equipped with similar-looking protocols, such as 802.11g or 802.11n. Those slight differences, however, mark important distinctions about what a given router is capable of, as different protocols offer varying capabilities. The main features to look for in a router are its throughput (how much data a router can handle at a given time) and the wireless frequency band it uses, such as 2.4GHz and 5GHz.



Wireless-G

Throughput: 54Mbps
Frequency: 2.4GHz

Wireless-G routers (802.11g) have been a strong wireless networking option for several years, offering far greater performance than the older Wireless-A (802.11a) and Wireless-B (802.11b) standard but at an affordable price. Although it's still perfectly capable of handling most online applications such as Web browsing, email, and some audio and video streaming, Wireless-G is being replaced by the faster and more versatile Wireless-N (802.11n) standard.

Wireless-N

Throughput: 300Mbps
Frequency: 2.4GHz

About six times faster than Wireless-G and with a greater range, Wireless-N routers are the latest and greatest in wireless networking protocols. Because all 802.11 protocols are backward-compatible, you can go ahead and upgrade your router to Wireless-N even if your other networked devices use an earlier protocol, such as 802.11g or 802.11b. When you eventually replace those devices with ones that are equipped with Wireless-N technology, your network will be ready.

Wireless-N Plus (Dual Band)

Throughput: 300Mbps
Frequency: 2.4GHz and 5GHz

If the speed of a Wireless-N router isn't enough for you, consider upgrading to a Wireless-N plus router. The main advantage of one of these speedy routers is that they make use of dual-band technology, letting it operate on 2.4GHz and 5GHz wireless frequencies. This enables the router to handle two data streams at once without one slowing down the other.

For example, you can download a big file on the 2.4GHz band while streaming HD video on the 5GHz frequency; it's like having twice the throughput. A Wireless-N plus router is ideal for an environment with multiple network users or multitaskers.

Your Best Scholastic Assistant

Dell's Studio S1558-5691MSL Laptop

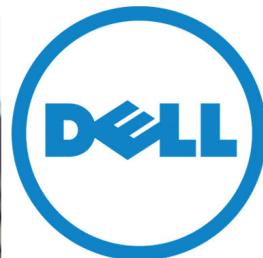
When you're a busy and committed student, there never seems to be enough time for both work and play. This is all the more reason why a quality laptop is a necessary tool for your academic success. Dell offers a student-inspired laptop design in its Studio S1558-5691MSL model, so you'll be well-equipped whether you're taking lecture notes, contributing to a group study session, or sharing the latest viral video with friends.

The Inside Counts

Dell's school-friendly notebook is packed with specs that any student can benefit from, such as 4GB of RAM*, a 500GB* hard drive, and a six-cell battery that offers up to 4 hours and 35 minutes of battery life* when it's unplugged. The Intel Core i3 processor features 4-way multithreading, which leads to high-performance computing and HD graphics power for last-minute academic projects.

Study Breaks

Every student needs to put the books down for a moment and reconnect with friends and family. With the Studio S1558-5691MSL's 2.0MP Web cam they can video chat with loved ones back home in digital clarity with an Internet connection. And if their conversations remind them to upload their spring break photos to their laptop, Dell Studio S1558-5691MSL offers a memory card reader that supports eight different formats.



Entertaining Extras

The Studio S1558-5691MSL laptop is configured with integrated audio components such as the internal subwoofer and dual digital array microphone. On top of this, the slot-loading CD/DVD burner makes it possible to create backup copies of your projects.

When Specs Speak Up

Dell put a lot into the Studio S1558-5691MSL. Here's a look at what a student will get:

- Intel Core i3 processor (2.26GHz)
- 15.6-inch HD (720p) LED Display with TrueLife and Camera
- 500GB* hard drive
- 4GB Dual Channel DDR3*
- ATI Radeon HD 5470 graphics* card
- Slot-loading CD/DVD burner
- 8-in-1 memory card reader
- Three USB ports and one HDMI output



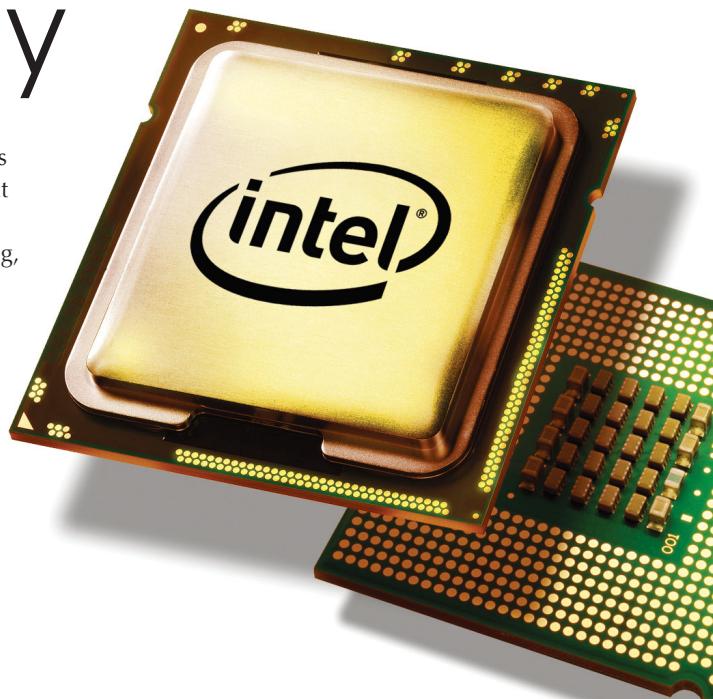
*GRAPHICS AND SYSTEM MEMORY (SDRAM): Significant system memory may be used to support graphics, depending on system memory size and other factors. HARD DRIVES: GB means 1 billion bytes and TB equals 1 trillion bytes; actual capacity varies with preloaded material and operating environment and will be less. BATTERY LIFE: Based on lab testing. Varies by configuration, operating conditions, and other factors. Maximum battery capacity decreases with time and use.

The Intel Core Processor Superhighway

The Intel Core i3, i5, and i7 processors let you do more, faster. Intel's (www.intel.com) latest processors feature two smart technologies that accelerate the things you do, such as enjoying HD video and other media, Web streaming, gaming, photo and video editing, multitasking, and more, like never before.

Avoid The Traffic Jam

Imagine the tasks you perform on your PC as cars on a highway. An underpowered computer is no different than being stuck in bumper-to-bumper traffic. To let you do the things you want to do with your PC without experiencing a slowdown, Intel's Core i3, i5, and i7 processors can efficiently get the job done.



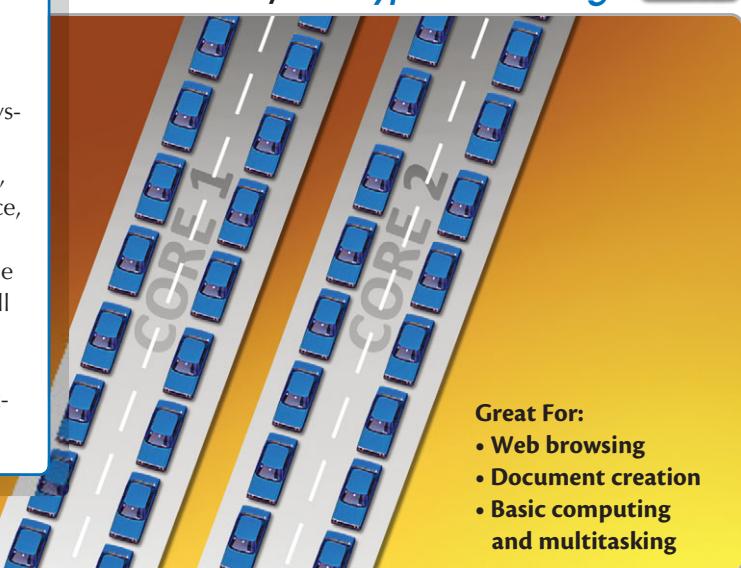
Hyper-Threading

More Lanes = Less Waiting

Hyper-Threading gives Intel Core processor-equipped systems the ability to handle multiple processes at once. Instead of having to process one thread of data at a time, Intel Core processors can handle multiple threads at once, effectively turning your PC into a computing superhighway. This ensures the PC works at your pace, not the other way around. The Intel Core i3 and i5 processors all support Intel's Hyper-Threading technology for 4-way processing and excellent multitasking performance. The Intel Core i7 processors support 8-way processing for extreme multitasking scenarios.

Intel Core i3

4-way with *Hyper-Threading*

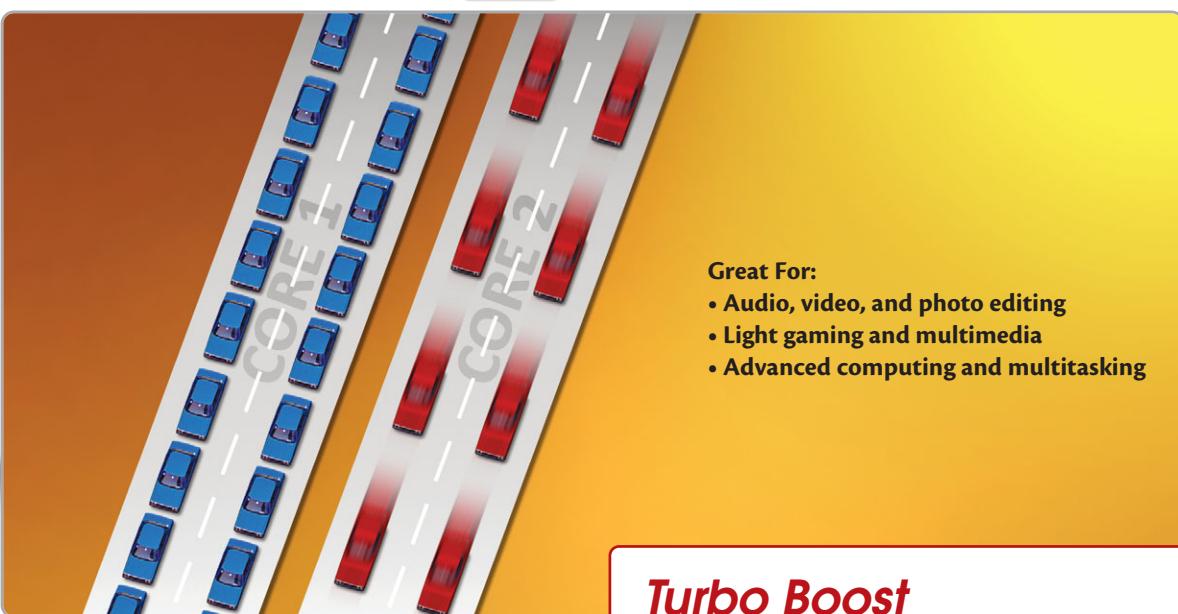


Great For:

- Web browsing
- Document creation
- Basic computing and multitasking

Intel Core i5

4-way with *Hyper-Threading* and *Turbo Boost*



Great For:

- Audio, video, and photo editing
- Light gaming and multimedia
- Advanced computing and multitasking

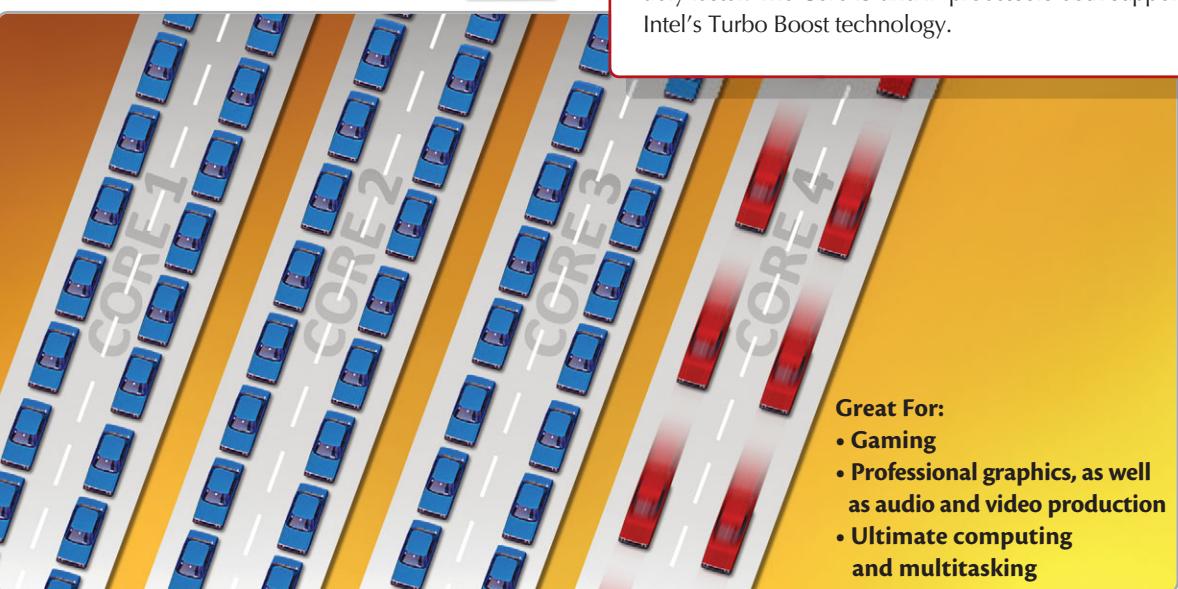
Turbo Boost

Computing In The Fast Lane

Turbo Boost is one of the smartest features you'll find on Intel Core processors. It detects when the software you're using isn't taking full advantage of the processor's multi-way computing capabilities and throttles the processor speed to complete the task as quickly as possible. This means, no matter what you do with your PC, the Intel Core processors with Turbo Boost can perform noticeably faster. The Core i5 and i7 processors both support Intel's Turbo Boost technology.

Intel Core i7

8-way with *Hyper-Threading* and *Turbo Boost*



Great For:

- Gaming
- Professional graphics, as well as audio and video production
- Ultimate computing and multitasking



Portable Hard Drives

Benefits Of Mobile Storage Devices

While a portable hard drive is convenient for backing up your important documents, media, and other files and expanding your computer's storage, there are even more reasons why these drives are beneficial for different lifestyles. Below are additional advantages of pairing a portable hard drive with your computer.

Affordability

Portable hard drives are typically priced based on the storage space they offer, meaning you'll pay more for a larger amount of space. With a range of storage capacities available (from 250GB to 2TB), you can avoid paying for space you won't use by selecting a model that fits your needs. If you plan to use a portable drive to transfer a small number of files to your drive, a lower-capacity 250GB unit should suffice. But, if you want to back up hundreds of your photo, movie, and project files, you should look for a drive with the largest capacity you can afford.

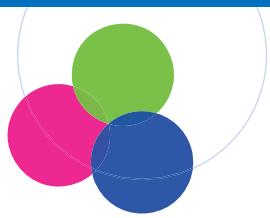
Portability

These hard drives are designed for someone who's always on the go. Weighing in around six ounces and standing no taller than five inches, a portable hard drive can easily fit into a bag or briefcase. Some models are durably built to withstand life's mishaps, such as accidental bumps and drops. Built with mobility in mind, a portable hard drive makes it simple to access documents using multiple computers. For example, students can transfer assignments between computer labs, and parents can share photos of their kids when they visit out-of-town family members.

Simple connectivity

Most portable hard drives have a USB 2.0 interface, allowing you to connect the device to a USB port on your computer to instantly save and access files without the need to install software. The USB connection also powers the portable hard drive, so you won't have to find an electrical outlet or deal with cable clutter to use the device. Aside from USB 2.0, you'll also find portable hard drive models that offer a FireWire connection. FireWire is found on select computers, and it can transfer files at speeds faster than USB 2.0.

BY AMANDA BOUC



Designed For Excellence

Epson Printers, Ink & Specialty Paper

Epson (www.epson.com) prides itself on designing printers, inks, and specialty papers that work together to bring you excellent results.

Every piece of Epson specialty paper features multiple, fine-grained layers for consistent performance, plus a unique coating. Epson's paper exudes quality, even before you print.



**Epson
SPECIALTY
PAPERS**



**Epson
INK**

Epson inks deliver laser-quality text and outstanding color. Its ink cartridges are available in individual colors—only replace the color you need. Whether you need to print occasionally or frequently, Epson offers a range of cartridge capacities to meet your individual printing needs.

**Epson
PRINTERS**

Printers, ink, and paper from Epson are designed to work together in a complete, top-to-bottom ecosystem. As a result, you'll get remarkable prints, time and again.



**Superior,
True-To-Life
Print Quality**

Incredibly fine control over the size and disposition of the ink droplets allows an Epson printer to literally build an attractive print, dot by dot.



**Reliable,
Hassle-Free Printing**

Paper jams just might be a thing of the past with precision-cut, dustless, non-curling Epson paper. And you won't inadvertently run out of ink in the middle of a large job with the help of Epson's Intellidige low ink notifications.



**Instant Drying,
Smudge Resistant**

Print 'em out and pick 'em up. Go ahead. You won't smudge your Epson prints. From the formulation of its inks to the coatings on its paper, your Epson printing system is tuned for nearly instant, permanent images.



**Prints That Last
Up To 200 Years**

Epson prints resist fading because the paper and ink are stable, complementary, and compatible. Your important documents and cherished photos will be reassuringly long-lasting, whether they are in an album, under glass, or in archival storage.

Go to www.epson.com/dfe for more information.

Give Future CEOs Their First Office

The Benefits Of Microsoft Office 2010 For Your Student

As we head into the school year, our thoughts turn to what our kids will need for class. Microsoft PowerPoint has been the presentation tool of choice for many years, and in PowerPoint 2010, Microsoft (www.microsoft.com) has added new features, such as advanced picture and video editing, that make it easy for students to create captivating slideshows that will help them stand out in class. PowerPoint 2010 is sold as part of Office 2010 Home and Student (\$149.99), which also includes other helpful programs for students, such as Word 2010 and OneNote 2010.



Media Enhancements

You can now edit and add effects to video and audio clips within PowerPoint 2010, so you won't need another editing application to trim, add fades, or apply animations.

PowerPoint 2010 embeds a copy of your media into the presentation, which means that whatever changes you make to the audio or video file won't affect the original clip.

Designed To Share

Adding media files greatly increases the file size of your slideshows, so PowerPoint 2010 includes a Compress Media feature that reduces the file size and makes the presentation easier to share with others.

A Broadcast Your Slide Show option allows you to share the presentation with classmates, even if they don't have PowerPoint 2010 installed. Broadcast Your Slide Show will send others a Web link that will let them view the slideshow in their Web browser.

Co-authoring allows group members to work on a single presentation from different computers.

Visual Effects

To grab your audience's attention, PowerPoint 2010 features new styles and effects, including reflections, bevels, and 3-D rotation. Microsoft lets you preview and customize transitions and animations to help you quickly find the effect that best suits your purpose.

With images, PowerPoint 2010 offers new photo effects, such as colorize and adding textures.

A Live Preview window is provided to let you see the change before you apply it.

ESSENTIAL THINGS TO KNOW

PC Speakers

Q How do I find a speaker system that's compatible with my computer?

A PC speakers are universally supported by new desktop, laptop, and netbook computers. Speaker systems use either a 3.5mm audio plug or USB port to connect to your PC, so you'll need to select which one will work best with your computer setup.

Q What audio controls can I find on PC speakers?

A A volume control knob can be found on almost all speakers. More advanced models will include a mute button and provide controls that let you adjust your audio's bass and treble levels.

Q What's the difference between standalone laptop and PC speakers?

A Generally, laptop speakers are lightweight and compact, which makes them more portable than desktop PC speakers. Because of their size, laptop speakers aren't usually as powerful as desktop PC speakers.

Q How do PC speakers with 3.5mm plugs or USB ports differ?

A A speaker system that connects to your computer via an auxiliary 3.5mm audio plug, which is the connector typically found on headphones, includes a power supply that will need to be plugged into an electrical outlet. A USB system is self-powered and doesn't require a power supply.

Q Can I upgrade my computer's 2.1 speaker system to a 5.1 surround-sound system?

A Yes. In order to use a 5.1 system, you'll need to make sure your computer has a sound card that supports surround-sound audio.

Q What do 1.0, 2.0, 2.1, and 5.1 mean?

A These numbers indicate the number of speakers found within a system. Full-range speakers are listed first, and the .1 represents a subwoofer.

Q Are wireless speakers available for PCs?

A Yes. Some wireless speakers are compatible with PCs, giving you flexibility with where you can place them. It's important to note that wireless speakers will require battery power.

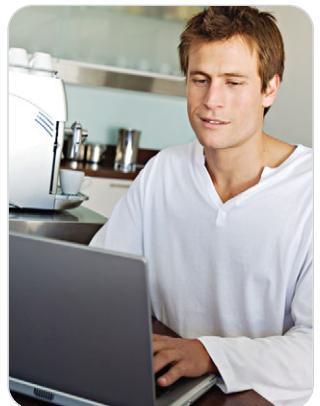
Q What accessories are included with PC speakers?

A Some PC speaker systems come with a remote control and cable adapters for other components, such as game consoles.

Q What are my speaker options if I have limited space around my computer?

A You'll want a speaker built with small spaces in mind, such as sound bars that fit under your monitor or compact speakers that take up very little desk room.





Computing Glossary

Shopping for a computer can be intimidating, especially with all of the complex terminology. Here, we'll explain some common computer jargon.

Bluetooth—A short-range wireless standard that connects devices such as computers, printers, PDAs, and digital cameras so they can be used together without being connected physically with a cord.

broadband—Network connections that transmit high-speed Internet access. Broadband speed varies depending on the provider. Cable companies offer speeds of around 8 to 11Mbps, whereas phone companies offer DSL (Digital Subscriber Line), which supports speeds of 3 to 5Mbps.

CRT (cathode-ray tube)—An old analog display technology for TVs and computer monitors. It features an electron gun illuminating phosphor dots that line the inside of a glass tube. When the phosphors are lit, they display on-screen images. CRTs consume a great deal of power and are heavy and bulky. Many CRTs support digital signals, though these degrade when converted to analog.

dual-core processor—This integrated circuit, which controls the computer,

features two processors, each with its own cache, on a single die or chassis. In a dual-core configuration, the operating system has two processors to handle instructions, speeding up the computer and its ability to multitask.

Ethernet—A widely used LAN protocol in which computers and networks are physically linked with a cord.

firewall—Hardware or software that limits access by a network or another outside source to your computer; it also may limit your computer's access to the network. These security measures are designed to protect your computer from outsiders who'd like to exploit it in some way. By the same token, firewalls may prevent infected files on your computer from accessing the larger network and spreading the problem to other users.

LAN (local-area network)—A group of computers that are physically connected by wires so they can communicate with one another and share information.

LCD (liquid-crystal display)—This technology sandwiches liquid crystals between thin sheets of glass. The crystals twist and untwist to allow and block light from a backlight, forming the images you see. LCDs are thinner, lighter, and consume less power than CRTs. Initially used mostly in notebook PCs,

you'll now find LCD TVs and computer monitors, and they are also in digital cameras, cell phones, portable DVD players, and other devices.

office suite—Productivity software, such as Microsoft Office, StarOffice, and OpenOffice, that often includes word processing, spreadsheet, presentation, database, and financial tools.

operating system—The software, such as Windows Vista, Windows 7, or Mac OS X, that controls a computer and its peripherals and serves as the primary interface for the users.

processor—Also known as a microprocessor or the CPU, this integrated circuit controls the computer.

RAM (random-access memory)—A type of memory that's read from and written to by the CPU and hardware.

upgradeable—This term refers to the ability to add or swap out hardware to boost a computer's performance, increase its speed, or replace a defective or obsolete device or component. For instance, you may add more memory, replace an old CRT with a widescreen LCD, or swap out an older video card for a newer one that features an ATSC TV tuner so you can watch digital TV on your computer. Look for a computer with expansion slots or empty bays.

Software Listings

Get More Out Of Your PC

Computers can be used to create greeting cards, play games, keep track of your finances, and more. The thing is, most of these functions aren't available straight out of the box. To fully harness your computer's potential, you'll need to buy software. Here are some options.

Audio, Photo & Video



Adobe Photoshop Elements 8
\$99.99*
www.adobe.com

Easily edit, share, and manage your photo collection with Adobe Photoshop Elements 8. You can also work with video clips.



Corel PaintShop Photo Pro X3
\$99.99*
www.corel.com

Corel PaintShop Photo Pro X3 lets you manage, edit, and share your digital photos. You can make automatic fixes in the enhanced Express Lab, or you can use the included advanced editing tools.



Broderbund PrintMaster Platinum
\$39.99*
www.broderbund.com

Create projects such as photo greeting cards, scrapbook pages, family newsletters, and more with the templates and fonts included with PrintMaster Platinum. You can also edit photos before adding them to your projects.



Roxio Creator 2010
\$99.99*
www.roxio.com
Use Roxio Creator 2010 to easily capture, enhance, and save your photos, videos, and audio projects. Sharing is available using a variety of methods. It also includes tutorials for advanced users and beginners.



Pinnacle Studio Ultimate Collection
\$129.99*
www.pinnaclesys.com

Pinnacle Studio Ultimate Collection comes with a full set of plug-ins and a Chroma-key green screen for advanced effects, editing, and production.



Corel Photo & Video Pro X3 Bundle
\$149.99*
www.corel.com
The Photo & Video Pro X3 Bundle from Corel features powerful editing tools for both photos and videos as well as tools for organizing your media and creating projects.



Roxio Toast 10 Titanium For Macs
\$99.99*
www.roxio.com

Use Toast 10 Titanium to burn audio tracks, video clips, and other data to disc or convert files for playback on other devices.



Apple Final Cut Express 4
\$199*
www.apple.com

A drag-and-drop interface provides seamless movement between editing, trimming, and adding effects to your videos. The software is compatible with popular HD formats, including HDV and AVCHD.

Business Applications



Microsoft Office Home & Student 2010
\$149.99*
www.microsoft.com

The Home and Student version of Microsoft Office 2010 has enhanced features for creating and managing documents and includes Word, PowerPoint, Excel, and OneNote.



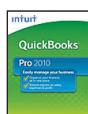
Individual Software ResumeMaker Professional
\$29.95*
www.individualsoftware.com

It's easy to write a professional resume quickly using ResumeMaker Professional. It also includes advanced search tools.



Intuit Quicken Home & Business 2010
\$99.99*
www.quicken.intuit.com

The 2010 version of Quicken Home and Business includes automatic bill reminders and a one-page view of your finances. Plus, it shows you where you are spending and where you can save.



Intuit QuickBooks Pro 2010
\$179.95*
www.quickbooks.intuit.com
Easily keep track of your company's finances with QuickBooks Pro 2010. You can organize and reference your customer, vendor, and employee financial information all in one place.

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Games/ Entertainment



Activision Barbie & The Three Musketeers
\$19.99*

www.activision.com

Choose a character with a unique ability to help you tackle obstacles and solve puzzles to uncover a plot against the prince and become a true musketeer.



Disney Interactive Studio Alice In Wonderland
\$19.99*

disney.go.com/disneyinteractivestudios

Inspired by the Tim Burton film, this game lets you fall down the rabbit hole and experience Alice's adventure in Wonderland. You can play as the Mad Hatter, White Rabbit, or another character from the film to help Alice on her journey.



Electronic Arts The Sims 3
\$49.95*

www.ea.com

Create your very own Sims. Customize their personalities, appearances, and homes and send them out into the world to explore the neighborhood and meet new friends.



Lego Indiana Jones 2: The Adventure Continues
\$29.99*

www.lucasarts.com

Explore the locations from all four films and build your own levels and environments. And, all of your favorite characters are depicted in Lego form.

Home Productivity



Nuance Dragon NaturallySpeaking 10 Preferred
\$199*

www.nuance.com

Dictate emails, reports, and documents much faster than you can type by letting Dragon NaturallySpeaking do the typing for you. The software has an accuracy rate of up to 99%.



Apple MobileMe
\$99*

[www.apple.com
MobileMe, Apple's](http://www.apple.com/mobileme)

Internet service, lets you keep your email, contacts, and calendar up-to-date across your iPhone, iPod touch, Mac, and PC. It also lets you store and share documents online via iDisk, and you can manage everything online through a suite of Web applications at www.me.com.



DeLorme Street Atlas USA 2010 Plus
\$39.95*

www.delorme.com

Street Atlas USA 2010 Plus is updated with new roads and road names, and it's now ready to use on any of your favorite devices, such as GPSes, netbooks, computers, and smartphones.



Susteen Data Pilot Backup & Sync Kit (LG)
\$24.99*

www.datapilot.com

Back up and sync your cell phone memory to your computer with a backup and sync kit. Kits for other phone manufacturers are also available.

Security/ Utilities



Kaspersky Lab Internet Security 2011
\$79.95* See p. 49

www.kaspersky.com

This software includes features to protect you from the latest viruses, spyware, and malware threats for one year and three PCs.



Kaspersky Lab Anti-Virus 2011
\$59.95*

www.kaspersky.com

Kaspersky Anti-Virus 2011 includes essential protection against Internet threats, such as viruses, spyware, Trojans, and more, for one year and three PCs.



Webroot AntiVirus With Spy Sweeper 2010
\$49.95*

www.webroot.com

Protect up to three computers from viruses and spyware. Spy Sweeper stops both known and potential threats by blocking suspicious activity and is compatible with Microsoft's Windows 7 operating system.



Trend Micro Titanium AntiVirus+
\$39.95*

www.trendmicro.com

Trend Micro's Titanium Anti-Virus+ has been designed to run in the background, so it can provide protection from the latest threats without bogging down your system.

System Clean-Up & Repair



Avanquest Fix-It Utilities 10 Professional
\$49.95*

www.avanquest.com

Fix-It Utilities 10 Professional can make your computer run like new. It performs more than 250 tests to see what is slowing your computer down and then fixes the problem, giving you better performance.



iolo System Mechanic
\$49.95*

www.iolo.com

With System Mechanic, you can find and fix errors and fragmentation on your PC, clean out clutter, and optimize your system for best performance.



Acronis True Image Home 2010
\$49.99*

www.acronis.com

This software backs up your entire computer, including the operating system, files, settings, and more, so you can easily recreate your system in the event of data loss.



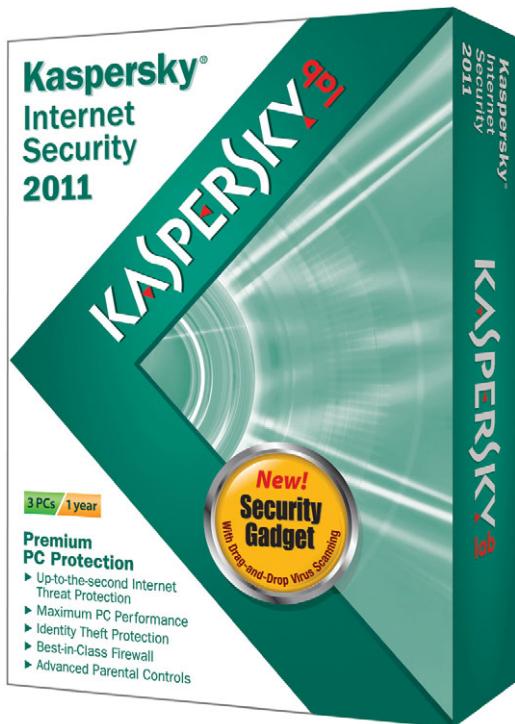
iolo DriveScrubber
\$29.95*

www.iolo.com

When it's time to get rid of your old computer, use DriveScrubber to ensure all of your personal data has been deleted. DriveScrubber will wipe your entire drive, including free space, and restore damaged drives.

Internet Security Suite

Innovative & Easy-To-Use



Kaspersky Internet Security 2011

MSRP: \$79.95

SKU: 1225401

www.kaspersky.com

Quick Overview

Kaspersky Internet Security 2011 is easy to use and delivers maximum PC performance while keeping you completely safe and secure from all online threats. It provides constant protection from viruses, Trojans, spam, hackers, and more. Its advanced technologies stay a step ahead of emerging threats by proactively seeking out suspicious activity on your system and blocking dangerous actions before they can cause any harm.

Perfect For

Those who want their private data and PC protected while using the Internet for online banking, social networking, sharing media, and more.

Outstanding Benefits

- The most immediate protection from viruses, spyware, spam, and more
- Optimized for maximum PC performance
- Enhanced identity theft and phishing protection, including a virtual keyboard
- Safe Surf to keep you from stumbling onto dangerous web sites
- Advanced Parental Controls to keep your kids safe and responsible online
- Best-in-class two-way firewall
- Special tools for installation on severely infected PCs
- Free technical support via phone, email, and live chat

Coolest Feature

Kaspersky's new Desktop Security Gadget gives you instant visibility to your protection status, easy access to the security features you use the most, and drag-and-drop virus scanning to ensure the safety of any files.

Which Notebook Computer Is Best For You?

A notebook computer is a pretty big purchase for most people, and it's usually a bit overwhelming, too. This chart compares the features and specs from several different types of notebook models.

		Operating system	Processor	Hard drive size; RAM	Screen size	Dimensions; Weight	Optical drives; Media card reader
What It Means		The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	The diagonal measurement of the notebook's screen	Height x width x depth; How much the laptop weighs	Drives that can read and write discs; Slots that read media cards without a separate peripheral
	Dell Inspiron 11545-3232OBBK MSRP: \$399.99* SKU 9947136	Windows 7 Home Premium	2.3GHz Intel Pentium	250GB; 2GB	15.6 inches	1.5x14.7x9.6 inches; 5.9 pounds	DVD±RW/CD-RW; Yes
	Toshiba Satellite C655-S5049 MSRP: \$454.99* SKU 9988402	Windows 7 Home Premium	2.2GHz Intel Celeron	250GB; 2GB	15.6 inches	1.5x15x11 inches; 5.5 pounds	Double-layer DVD±RW/CD-RW; Yes
	HP G62-225DX MSRP: \$499.99* SKU 9963407	Windows 7 Home Premium	2.3GHz Intel Pentium	320GB; 3GB	15.6 inches	1.4x14.7x9.7 inches; 5.5 pounds	Double-layer DVD±RW/CD-RW; Yes
	Dell S1558-5691MSL MSRP: \$799.99* SKU 9947084	Windows 7 Home Premium	2.26GHz Intel Core i3	500GB; 4GB	15.6 inches	1x14.6x10 inches; 5.5 pounds	Double-layer DVD±RW/CD-RW; Yes
	Apple MacBook MSRP: \$999* SKU 9944833	Mac OS X 10.6 Snow Leopard	2.4GHz Intel Core 2 Duo	250GB; 2GB	13.3 inches	1.1x13x9.1 inches; 4.7 pounds	Double-layer DVD±RW/CD-RW; No
	Sony VAIO VPCF12AFM/H MSRP: \$999.99* SKU 9987925	Windows 7 Home Premium	2.26GHz Intel Core i3	500GB; 4GB	16.4 inches	1.2x15.3x10.4 inches; 6.4 pounds	Double-layer DVD±RW/CD-RW; Yes
	Sony VAIO VPCS111FM/S MSRP: \$1,049.99* SKU 9701289	Windows 7 Home Premium	2.2GHz Intel Core i5	500GB; 4GB	13.3 inches	1.08 to 1.24x 12.95x9 inches; 4.4 pounds	Double-layer DVD±RW/BD/CD-RW; Yes
	Alienware M15x MSRP: \$1,999* SKU 9722255	Windows 7 Home Premium	1.6GHz Intel Core i7	320GB; 4GB	15.6 inches	1.9x14.9x 12.2 inches; 9 pounds	Double-layer DVD±RW/CD-RW; Yes

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which Netbook Is Best For You?

Netbooks don't offer the full capabilities that notebooks do, but these compact devices are ideal for those who need to stay connected while on the go. To find the netbook that fits your mobility needs, here's a comparison of the latest models.

		Operating system	Processor	Hard drive size; RAM	Graphics card	Memory card reader	Ports
What It Means		The software (usually Windows XP or 7) that controls your PC	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Controls the quality of the video and images you see on-screen	Slots that can read media cards without a separate peripheral	Sockets that give your computer access to different peripherals
	HP Mini 110-3015dx MSRP: \$249.99* SKU 9996501	Windows 7 Starter	1.66GHz Intel Atom	160GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MMC	3 USB, 1 Ethernet, 1 VGA
	MSI Wind U135-206US MSRP: \$309.99* SKU 9748977	Windows 7 Starter	1.66GHz Intel Atom	160GB; 1GB	N/A	Included	3 USB, 1 Ethernet
	Gateway LT2104u MSRP: \$329.99* SKU 9695408	Windows 7 Starter	1.66GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MMC/ MS/MS PRO/ xD-Picture Card	3 USB, 1 Ethernet, 1 VGA
	Toshiba NB255-N250 MSRP: \$329.99* SKU 9998457	Windows 7 Starter	1.66GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/SDHC/ MMC	3 USB, 1 Ethernet
	Asus Eee PC 1018PB-BK801 MSRP: \$349.99* SKU 9966726	Windows 7 Starter	1.66GHz Intel Atom	250GB; 1GB	Intel UMA	Included	3 USB, 1 Ethernet
	Dell Inspiron Mini 1012-558PRP MSRP: \$349.99* SKU 9980713	Windows 7 Starter	1.66GHz Intel Atom	250GB; 1GB	Intel NM10 Express	SD/MMC/MS	3 USB, 1 Ethernet
	Samsung N150-11 MSRP: \$349.99* SKU 9973683	Windows 7 Starter	1.66GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/SDHC/ MMC	3 USB, 1 Ethernet
	Sony VAIO M VPCM121AX/P MSRP: \$399.99* SKU 1002933	Windows 7 Starter	1.83GHz Intel Atom	250GB; 1GB	Intel Graphics Media Accelerator 3150	SD/MS Duo	3 USB, 1 Ethernet, 1 VGA

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which All-In-One PC Is Right For You?

An all-in-one computer is compact, thanks to all its hardware being placed in the monitor. Some models offer a touchscreen interface that lets you access functions by selecting on-screen items with your finger, while others rely on a wireless mouse and keyboard. To see which all-in-one PC fits your needs, check out the chart below.

		Operating system	Processor	Hard drive size; RAM	Display; Optical drive	Ports	Graphics card
	What It Means	The software (usually Windows or Mac OS X) that controls your computer	Chip that controls the computer (typically, a bigger number is better)	How much data the computer can hold; Memory that's read and written to	Display size (measured diagonally); Disc drive included with the system	Inputs the computer has for accessing peripherals	Controls the quality of your video and images
	Lenovo C200 4025-1AU MSRP: \$399.99* SKU 9993268	Windows XP Home Edition	1.66GHz Intel Atom	160GB; 1GB	18.5 inches; Double-layer DVD±RW/ CD-RW	5 USB, 1 Ethernet, media card reader	Intel GMA 3150
	HP MS235 MSRP: \$679.99* SKU 1007756	Windows 7 Home Premium	1.6GHz Athlon II X2	320GB; 4GB	18.5 inches; Double-layer DVD±RW/ CD-RW	6 USB, 1 Ethernet, media card reader	N/A
	Sony VAIO VGC-JS450F/S MSRP: \$999.99* SKU 9561592	Windows 7 Home Premium	2.7GHz Intel Pentium	500GB; 4GB	20.1 inches; Double-layer DVD±RW/ BD/CD-RW	5 USB, 1 Ethernet, media card reader	Nvidia GeForce 9300M GS
	Apple iMac MSRP: \$749.99* SKU 9952387	Mac OS X Snow Leopard	3.06GHz Intel Core i3	500GB; 4GB	21.5 inches; Double-layer DVD±RW/ CD-RW	4 USB, 1 Ethernet, media card reader	ATI Radeon HD 4670
	Gateway ZX4300-01e MSRP: \$749.99* SKU 9932711	Windows 7 Home Premium	2.7GHz AMD Athlon II X2	640GB; 4GB	20 inches; Double-layer DVD±RW/ CD-RW	6 USB, 1 Ethernet, media card reader	ATI Radeon HD 4270
	HP TouchSmart 300-1120 MSRP: \$899.99* SKU 9912717	Windows 7 Home Premium	2.7GHz AMD Athlon II X2	750GB; 4GB	20 inches; Double-layer DVD±RW/ CD-RW	5 USB, 1 Ethernet, media card reader	ATI Radeon HD 3200
	HP TouchSmart 300-1122 MSRP: \$999.99* SKU 9912753	Windows 7 Home Premium	2.8GHz AMD Athlon II X2	1TB; 4GB	20 inches; Double-layer DVD±RW/ CD-RW	5 USB, 1 Ethernet, media card reader	ATI Radeon HD 3200
	Lenovo Ideacentre 4024-1BU MSRP: \$1,299.99* SKU 1021064	Windows 7 Home Premium	1.6GHz Intel Core i7	320GB; 4GB	23 inches; N/A	4 USB, 1 Ethernet, media card reader	Intel X4500 HD

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NOTEWORTHY Accessories & Services



KEYBOARD

- An ergonomic design can cut down on the wrist strain associated with carpal tunnel syndrome
- Bluetooth connectivity lends itself to a tidy desk because there's one less wire to contend with
- A specialty model, such as a gaming or media keyboard, adds functionality to your pastime of choice



USB HUB

- Offers an affordable way to connect all of your peripherals, even if you have more gadgets than USB ports
- Adds the convenience of easy USB access—no more reaching behind your computer to plug in your USB devices



EXTERNAL HARD DRIVE

- Protect precious video and photo memories: Back up to an external hard drive
- Keep your computer running more efficiently by saving large files, such as your media collection, on an external drive



MOUSE

- A wireless mouse will cut down on cable clutter at your desk and also offers the convenience of portability for laptop use
- A gaming mouse can deliver better accuracy and speed for the ultimate in control
- Consider customizable buttons if you want to be able to access media, files, or programs with one-touch access



CLEANING KIT

- Specially designed cleaners will keep your computer screen clean without running the risk of scratching its surface
- Cloths are often made of low-conductivity material in order to reduce static



PRINTER

- A quality photo printer will eliminate trips to the drug-store for 4x6 prints and give you the ability to instantly share your photo memories
- An all-in-one model is the perfect addition to any busy family that needs a device that can operate as a copier, scanner, fax machine, and printer



SURGE PROTECTOR

- Ensure the electrical current running to your desktop or laptop computer doesn't exceed proper levels
- Portable models will protect your laptop when you're on the go for work or play



COMPUTING SERVICES

To keep your desktop or laptop computer in tip-top shape, take advantage of the computing services offered at your local CE retailer. They can help you keep your machine running smoothly and free from the dangers that lurk online.



WEB CAM

- Bridge the gap between long-distance family and friends with online video chatting by adding a Web cam to your setup

- Computer Setup & Networking
- Virus & Spyware Removal
- Data Backup & Recovery
- Hardware & Software Upgrades
- Training & Consultation

HOW TO BUY A

Satellite Radio Device

Different Forms, Different Features



Satellite radio devices can be used in vehicles, in homes, and as on-the-go portable radios. To help you find the type that best fits your lifestyle, here's an overview of features that are specific to each type.

In-dash vs. portable. Most satellite radio devices can be categorized as in-dash or portable. In-dash devices are actually installed in your vehicle and can't be removed, while portable devices can be taken with you everywhere and used with in-car or home kits, including stereos with built-in docks. Some portable satellite units have a headphone jack, so you can listen to music just like you would with an MP3 player.

... portable devices can be taken with you everywhere and used with in-car or home kits . . .

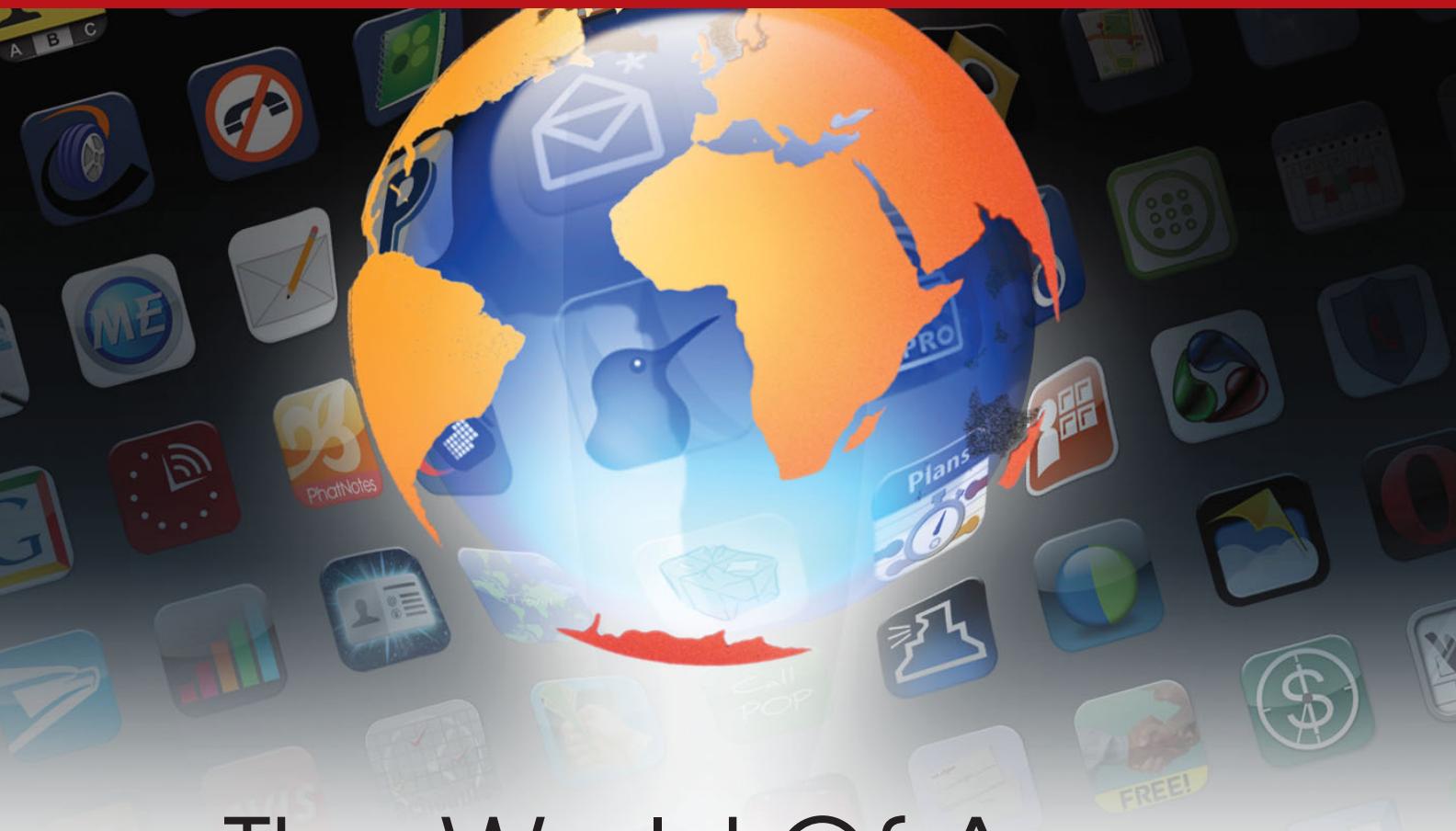
In-dash satellite radio devices. If you are interested in subscribing to a satellite radio service and plan to listen to it primarily in your vehicle, you may want a satellite radio-ready deck. With some satellite radio receivers, you only need to sign up for satellite radio service to begin receiving the signal. However, it's important to note that while many in-dash decks claim to be "satellite radio-ready," you will often need to purchase a tuner, antenna, and subscription before you can start listening to satellite radio in your car.

... you will often need to purchase a tuner, antenna, and subscription before you can start listening . . .

Portable satellite radio players. If you would rather take your satellite radio with you while walking or want to be able to move the device from place to place, you should consider a portable satellite radio player. These can be used with headphones as well as in-car or home kits. You can also purchase docks that are compatible with your device. Portable players provide many of the same satellite radio features that in-dash players do, such as saving favorite stations and rewinding, with the added benefit of allowing you to take satellite radio service with you wherever you go.

... consider a portable satellite radio player.

BY JOSH COMPTON



The World Of Apps

How They Compare To Portable Gadgets

Portable devices are becoming increasingly user-friendly, but the app selection is growing even faster. To see what your options are for completing a variety of tasks, here's a look at the apps available for smartphones and how they compare to similar devices.

eReader Apps

If you want to read ebooks on your smartphone, you can download an app that gives you access to classic ebook titles or online ebook retailers.

Using an ebook app on a smartphone offers you ultra-portability and the convenience of having a multifunction device.

Some eReader apps let you adjust text size, change color schemes, and choose short stories based on your personal preferences.

GPS Apps

A smartphone GPS app saves you from carrying two separate devices (both a portable GPS and smartphone).

You can take it on a road trip, in your sailboat, or on a hike, so you can navigate where you have a reliable 3G connection.

GPS maps are refreshed with new software updates for your smartphone applications.

Remote Control Apps

Some TV manufacturers have released apps that let you use your smartphone as a remote control for your Wi-Fi-enabled TV.

Other apps can be used to control the music library on your computer and other devices.

You can download an app that's capable of controlling indoor lighting, stereos, and video equipment when paired with your home automation system.

BY JOANNA SAFFORD

ESSENTIAL THINGS TO KNOW

MP3 Player Content

Q What is DRM, and how does it affect my MP3 player's content?

A Content producers (such as record labels) use DRM (digital rights management), which is extra code in a digital file that restricts a file's use as a way to cut down on illegal activities such as piracy. DRM-protected files may only be played on certain MP3 players, or the software may restrict how many devices you can copy a file to. Some DRM-protected content from a given online service is designed to work only with certain devices, although there is plenty of DRM-free content available elsewhere.

Q Can I add content to my MP3 player with a memory card?

A Some MP3 players allow you to add content to your player with a memory card.

Q What type of content can I add to my MP3 player?

A Depending on the capabilities of a given MP3 player, you can add audio, video, and photos to it. Some even allow you to install and run applications.

Q Can an MP3 player show or display non-audio content?

A Depending on the model, you might be able to view photos and even watch video on your MP3 player.

Q Can I add files that I made myself, such as a home video or self-recorded song?

A Yes, as long as the file in question is in a format that your MP3 player supports. Consult your users manual for a list of supported file formats.

Q Can I share the content stored on my MP3 player?

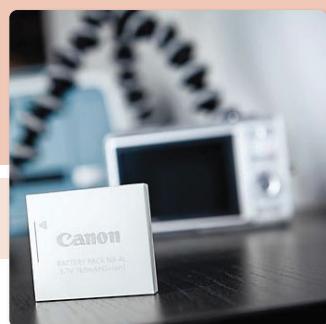
A Sharing capabilities vary from device to device and may be limited by DRM protections, but some devices let you or share it directly on sites such as YouTube or Flickr.

Q Can I add audio content to my MP3 player that is not in the MP3 format?

A Yes, most MP3 players support various other audio formats, such as AAC and WAV. However, MP3 files take up less storage space than other audio files, so you can fit more tracks on a given device.

Q How do I add content to my MP3 player?

A MP3 players from different manufacturers have their own means of adding content, but in general, you can add content to an MP3 player by downloading it directly to the device from an online service or syncing the MP3 player to content stored on a computer.



MP3 Player Glossary

Who doesn't want an MP3 player? It can help you relax, motivate you, and ensure you always have a song to match your mood. When you head to your local CE retailer to snag one, make sure you have this glossary so you can choose the perfect model.

AAC—Short for Advanced Audio Coding, this format is a competitor of the more common MP3 file format. It is the default format used by Apple.

Click Wheel—Apple's proprietary circular control on the front of the iPod.

Certified For Windows Vista—A certification from Microsoft that ensures your portable devices, such as MP3 players, and media, such as digital music and videos, are compatible with each other. This was once called PlaysForSure.

download—In terms of digital music, downloading is when you retrieve a song from an Internet site or another network connection and save it to your computer or portable music player. You can download songs from music Web sites such as iTunes, Napster, or Rhapsody.

DRM (digital rights management)—A security mechanism for digital media, associated with copyright. A common DRM scheme for digital music involves getting a licensed file to authorize playback of a free or purchased song.

earbuds—Small, circular devices you put into your ears so you can listen to music on your player. These serve the same function as headphones. Many music players

include their own earbuds, but you can purchase a separate pair that are more comfortable or of better quality.

flash memory—Solid-state memory with no moving parts that is lightweight and small. In terms of digital music players, a flash-based player is lighter and smaller than a hard drive-based player, and also, it won't skip. Thus, flash-based players are popular for use during exercise. However, the capacity of a flash-based player isn't as large as a hard drive-based player.

FM tuner—If your music player has a built-in FM tuner, you will be able to listen to music that is broadcast from local radio stations.

hard drive—Storage that consists of rigid platters inside a fixed casing. In terms of digital music players, a hard drive-based player is larger and heavier than a flash-based player. Because of the moving parts (the platters), hard drive-based players are also prone to skipping. However, their capacities are much larger than those of flash-based players.

music management program—A program, such as iTunes or Napster, that loads onto your computer and lets you play, organize, and download and purchase media, such as music and videos, for your player or PC.



MP3—Perhaps the most popular digital audio encoding format. It compresses audio to about one-twelfth the original size while still providing excellent sound. In general, a 1MB MP3 file will last about one minute.

playlist—A queue of songs a user creates to play on a computer, burn to a CD, or transfer to an MP3 player. The playlist includes only directions to the location of the songs, not the songs themselves.

podcast—A downloadable episode that is similar to a radio program. A user can subscribe to a podcast for updated episodes, or she can download podcasts one at a time.

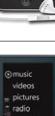
screen—The display on the front of a portable music player. A player's screen can either display in color or black and white.

WMA—Windows Media Audio is a digital audio format created by Microsoft.

widescreen—A screen with a 16:9 aspect ratio.

Which MP3 Player Is Best For You?

iPods are cool, sure, but you have other choices when it comes to listening to your tunes. This chart compares the most important—and coolest—features from select MP3 players.

		Memory type	Capacity	Songs	Video; FM tuner capabilities	Colors	Battery life
What It Means		Hard drive (moving parts, more capacity) or flash (no moving parts)	How much memory the player has	Based on four-minute songs at 128Kbps, the number a player can hold	Some MP3 players can play video or let you listen to radio stations	Several players offer a variety of color choices	How long the battery will last when playing music
	Archos 15 Vision MSRP: \$39.99* SKU 1111506	Flash	4GB	2,000 (3.5 minutes per song at 64Kbps)	Both	Gray	10 hours
	Apple iPod shuffle MSRP: \$59*; \$79* SKU 9229596	Flash	2GB; 4GB	500; 1,000 (AAC)	Neither	Black, silver, pink, green, blue	10 hours
	Sony E Series Walkman MSRP: \$79.99* SKU 9443792	Flash	8GB	N/A	Both	Black	30 hours
	Samsung YP-RO MSRP: \$99.99* SKU 1033157	Flash	8GB	N/A	Both	Black, pink, silver	30 hours
	Apple iPod nano MSRP: \$149*; \$179* SKU 9416376	Flash	8GB; 16GB	2,000; 4,000 (AAC)	Both	Pink, orange, green, blue, purple, black, silver	24 hours
	Samsung R1 MSRP: \$149.99* SKU 1033139	Flash	8GB	N/A	Both	Silver	25 hours
	Apple iPod touch MSRP: \$199*; \$299*; \$399* SKU 8771732	Flash	8GB; 32GB; 64GB	1,750; 7,000; 14,000 (AAC)	Yes; No	Black	30 hours
	Microsoft Zune HD MSRP: \$199.99*; \$269.99*; \$349.99* SKU 9449581	Flash	16GB; 32GB; 64GB	4,000; 8,000; 16,000	Both	Black, platinum	33 hours

*Prices listed in this issue are for general reference and may vary from retailer pricing.

Which GPS Device Is Right For You?

One of the hottest CE devices around right now is a GPS, and what a useful device it is, too. Here, we compare some models available on today's market. All of these units come with maps already loaded, and you can purchase additional maps, as well.

		Screen size; Dimensions	Text-to-speech; Traffic receiver	Preloaded maps	WAAS	Bluetooth; MP3 playback	Included charging adapters
What It Means		The diagonal measurement of the screen; Height x width x depth	Unit calls out specific street names; Unit receives traffic updates and re-routes accordingly	The regional maps that come included with the GPS unit	A satellite and ground station system that gives exceptional GPS accuracy	Some units communicate wirelessly with other Bluetooth devices or play MP3s	AC adapters plug into the wall; DC adapters plug into your car's cigarette lighter
	Garmin nüvi 205W MSRP: \$139.99* SKU 9470556	4.3 inches; 2.9x4.8x0.8 inches	No; No	Entire U.S. (including Puerto Rico)	No	No; No	DC adapter
	Insignia NS-CNV43 MSRP: \$199.99* SKU 9366116	4.3 inches; 3.2x4.8x0.7 inches	Yes; Yes	Entire U.S.	Yes	Yes; No	DC adapter
	TomTom XL 350TM MSRP: \$229.95* SKU 9927197	4.3 inches; 3.2x4.7x0.9 inches	Yes; Yes (with optional Traffic Link adapter)	Entire U.S. (including Puerto Rico), Canada, and Mexico	No	No; No	DC adapter
	Magellan RoadMate 3045-LM MSRP: \$229.99* SKU 9895142	4.7 inches; 3.4x5.4x0.6 inches	Yes; Yes	Entire U.S. (including Puerto Rico), and Canada	Yes	No; No	DC adapter
	TomTom XXL 540TM MSRP: \$259.95* SKU 1054495	5 inches; 3.2x4.8x0.9 inches	Yes; Yes (with optional traffic receiver)	Entire U.S. (including Puerto Rico), Canada, and Mexico	No	No; No	DC adapter
	Magellan RoadMate 1700 MSRP: \$299.99* SKU 9464153	7 inches; 4.2x7.5x0.6 inches	Yes; No	Entire U.S. (including Puerto Rico), and Canada	Yes	No; No	DC adapter
	TomTom GO 740 LIVE MSRP: \$349.95* SKU 9263281	4.3 inches; 3.4x5x0.9 inches	Yes; Yes	Entire U.S. and Canada	No	Yes; No	DC adapter
	Garmin nüvi 3760T MSRP: \$399.99* SKU 9888989	4.3 inches; 2.9x4.8x0.4 inches	Yes; No	Entire U.S. (including Puerto Rico), Canada, and Mexico	No	Yes; No	DC adapter

*Prices listed in this issue are for general reference and may vary from retailer pricing.

NOTEWORTHY

Accessories & Services

**GPS CHARGERS**

- Make sure your travel companion always has a full battery
- If you do run out of battery, charge your GPS with an adapter; these can plug into a wall, PC, or car's DC outlet

**MP3 PLAYER EARPHONES**

- Match earphones to your needs: If you don't want anything bulky, opt for earbuds that fit inside your ear; to hear every musical detail, try headphones that cover the ear completely
- Listen to your music without the interference of background noise with earphones that offer a noise-canceling feature

**MP3 PLAYER CASES**

- Protect your MP3 player from bumps and scratches
- Quickly access your player's functions with a clip
- Keep your player out of your way with an armband

**GPS MOUNTS**

- Mounts can be placed on a car dash or stuck to a windshield to be within reach

**MP3 PLAYER DOCKS & SPEAKERS**

- Portable speakers let you play music for a group; some include radios and can also play CDs
- With a portable dock, you can recharge your player's battery as you listen to music
- Play your music through car speakers using an FM transmitter

**CELL PHONE HEADSETS**

- Keep your hands free while still being able to use your phone
- Link compatible cell phones to a Bluetooth headset to make or take calls without a tangled mess of cables
- Use a headset that offers noise-canceling capabilities to ensure you don't miss any of your conversation

**CELL PHONE CASES**

- Safeguard your phone from wear and tear with a case
- Universal cases fit most sizes of cell phones; some of these will include clips and wrist straps for portability and accessibility
- Fitted cases specifically fit your phone's model type; these can be hard acrylic casings, rubber sleeves, or leather pouches
- Avoid getting scratches and fingerprints on your phone's screen with stick-on or hard, clear screen protectors

**MOBILE SERVICES**

Whether your wireless device is brand-new or nearing the end of its life span, your local CE retailer offers services to help you take care of all of its needs.

- Protection plans for GPSes, MP3 players, and cell phones
- Phone and battery recycling
- GPS setup and deck installation
- MP3 vehicle integration
- MP3 player setup and training
- Cell phone repair services and loaner phones

No matter where you are going, a wireless device can add enjoyment to your journey. To make sure you are taking full advantage of the capabilities your wireless devices offer, check your local CE retailer for accessories that can enhance your mobile experiences. We've listed our favorites below.

Car Audio Solutions

Why You Should Upgrade Your System

If you're still driving down the street listening through the factory-installed audio system your car came with, you're missing out. Whether listening to voice-dominated audio books, bone-crushing metal, classical music widely ranging in tempo, or hushed acoustical folk, your car audio experience can benefit from an upgrade in several areas. Here's how.

Subwoofers

Adding a new subwoofer to a car audio system will typically:

- Produce stronger, richer bass that's less likely to crackle or rattle at higher volumes
- Create more pleasing audio in hip-hop, rock, trance, reggae, and other bass-heavy genres
- Output a clean, distinctive bass tone vs. the muddled, overly thick bass that can occur when passing low, midrange, and high frequencies all through one speaker

Speakers

Upgrading to new aftermarket speakers can offer:

- Better-constructed, longer-lasting speakers that produce stronger, cleaner audio
- Enhanced clarity in higher frequencies—particularly beneficial for audio book listening
- More dynamic audio emitted from dedicated tweeters (high frequencies), woofers (lows/midrange), and subwoofers (lows) vs. standard speakers that mix frequencies
- Better performance at consistently higher volumes

Stereo Decks

Although decks vary, a newer model may support:

- DVD playback, a memory card slot, MP3 player compatibility, HD Radio or satellite radio, and built-in GPS
- A removable faceplate for increased security when away from the car
- Integrated Bluetooth for safer, hands-free mobile device use
- Steering wheel-mounted remote control abilities



Amplifiers

Depending on the aftermarket components you're installing, multiple amplifiers may be necessary. Benefits of aftermarket amps generally include:

- Components receiving proper amounts of power vs. underperforming factory amps unable of doing the same
- Individual components receiving cleaner power, resulting in a longer lifespan for components
- Less overall strain placed on otherwise underpowered speakers, meaning better consistent audio at varying volume levels

Car Video Solutions

Watch DVDs On The Road

If you're in the market for an in-car video player, you should start by considering whether you want an in-dash, overhead, or portable model. Below, we'll provide some must-know info about each type. Note that in-dash and overhead models will likely require professional installation.

In-Dash DVD Players

- An in-dash DVD player, mounted to your interior front dash, supports playback from DVDs, CDs, and other audio formats.
- If you install headrest monitors, passengers can watch content from your in-dash player from the backseat.
- Aside from supporting multiple DVD and CD formats, some in-dash models also include MP3 and WMA playback as well as satellite and HD Radio.

Overhead DVD Players

- An overhead DVD player is mounted to your car's ceiling, and the screen folds down when you want to watch something.
- You can choose from display sizes of about 7 to 15 inches, but most are around 10 inches.
- If you purchase a model with a TV tuner, you can access over-the-air TV programming. Or, an overhead player with an FM transmitter lets you stream music and talk radio from the DVD player to your car stereo.



Portable DVD Players

- Portable DVD players aren't installed in your vehicle—you can simply take them with you when you reach your destination.
- A portable DVD player is ideal for watching movies on your own because you can use noise-canceling headphones to drown out noisy family members in the van.
- Some portable DVD players include a USB port or SD card slot so you can upload music files or photos.

Putting On The Mix

Three Radio Options For Your Car

Whether you're commuting, running errands, or heading to your vacation spot, passing time in the car is much more fun with a variety of listening options. In addition to your AM/FM radio, you can listen to tunes or talk show programs through HD Radio and satellite radio. Plus, many in-dash and portable units will support all three types, so you'll always have something new to listen to.

AM/FM Radio

- AM/FM radio delivers local analog stations, and no subscription is required.
- Because AM/FM radio signals are subject to interference, your source of audio entertainment can sound fuzzy.
- Some devices let you create presets, so you can easily find the stations you listen to most. Also, many AM/FM radios can play CDs, and a handful offer MP3 player input connections.



HD Radio

- Some radio stations use a digital signal to broadcast HD Radio, which has better reception and sound than AM/FM radio. HD Radio devices can also pick up analog signals, giving you more radio content to listen to.
- There are no subscription costs, but you do need to purchase a car radio or portable device that supports HD Radio in order to listen to it, and there must be stations that broadcast in HD in your area.
- Depending on the device, you'll have preset options and support for CDs, satellite radio, and digital audio players. You might also be able to view text information sent out by the radio station, such as artist and album identifications.

Satellite Radio

- Satellite radio devices receive signals from satellites, so its programming can be accessed nationwide.
- Offering a variety of music and talk stations, some satellite radio programming is commercial-free. It also requires a monthly subscription.
- Because of the satellite connection, many satellite radio units also offer built-in navigation capabilities. Additionally, many devices also support CDs, digital audio players, HD Radio, and AM/FM radio.

Some Navigation Direction

GPS Features To Look For

Because of GPS navigation, many of us no longer have to stop and ask for directions. After all, the GPS can always direct us where to go. Even if you already have a GPS unit or phone with built-in GPS, the newest GPS devices include advanced features that will make it even easier to get around. Here, we'll take a look at some of them.

Stay Connected

- A GPS with built-in Bluetooth can serve as a hands-free calling device to help improve your driving safety. Just pair your mobile phone to the GPS, and you'll be able to answer and talk using the GPS' integrated microphone and speaker—no need to take your eyes off the road or your hands off the wheel. Some models can also display text messages and caller ID information.
- Select GPSes feature a cellular modem that lets the unit connect to the Internet. The Internet connection allows the GPS to receive real-time traffic alerts and weather updates to help you avoid accidents and slowdowns. To save you money, Internet-connected GPSes typically include a fuel price search that pinpoints the most affordable nearby gas stations.

Check Out The Extras

- Considering a map upgrade for your current GPS? You'll find that future map updates are now free for a number of new GPSes, such as some models from TomTom (www.tomtom.com). In most cases, you can update the maps up to four times a year. Thus, you may opt to invest in a model that you'll no longer need to pay to update rather than updating your old unit.
- Found on many recent GPS models, lane assist is a feature that tells you (or shows you) what lane you should be in when you're on a multiple-lane road. It can be a huge help when traveling on interstates, freeways, and expressways.



BY NATHAN LAKE

Car Security & Remote Starters

Protect & Prepare Your Vehicle

A car security system is more than just an added precaution. With car security systems, remote start, and other safety products, you can protect personal items in your car, save yourself from weather-related accidents, and maintain safety when driving.

Security Systems

- Car security systems are available as packages that may include remotes, a parking light flash, a shock sensor, and a siren.
- If you want to boost your system with more security features, you can add illuminated entry and keyless entry.
- When you want to make sure you've locked your parked car from a distance, a two-way keyless entry system lets you lock or unlock your car within a 2,000-foot radius and lets you know that the command was completed.

Car Safety Products

- You can be observant about what's going on behind your car, such as playing children or a tailgating car, by installing a license plate rearview camera.
- Rearview cameras can feature a mobile video system, a mounting bracket, in-dash monitoring deck, and LCD monitors.
- If you own a vehicle without power windows, adding a window automation system will let you roll them up and down with the press of a button and limit access to your car's interior when your security system is armed.

Remote Start Systems

- A remote start system includes a remote start key fob that lets you turn your car on without having to use a key.
- When you're ready to leave for work on a blisteringly cold morning and you don't want go outside to start your car or scrape your windshield, use a remote start system to turn on your car and defrost your windows.
- High-end remote start kits should include the parts you need for the system to work in your vehicle, such as an antenna, transmitter, wire harness, and door lock relay.



Accessories For Your Car

Enliven Your Drivin'

Whether you're traveling back and forth on a long commute to work or taking a road trip into unfamiliar territory, you can enhance your driving experience with a direct connect kit, Bluetooth car kit, or a dash mount for your GPS unit. Read on to learn about the benefits that each has to offer.

Direct Connect Kits

- By using a direct connect kit, you can listen to your MP3 player's music through your car stereo speakers. These kits are compatible with factory-installed stereo decks and let you plug a single cord into your device for playback. Typically, direct connect kits need to be installed by a professional.
- Whether you choose to listen to personal playlists or Internet radio from your MP3 player, a direct connect kit ensures interference-free sound.
- Keep the music going throughout your entire road trip with a connection kit that can also charge your MP3 player.



GPS Dash Mounts

- Drive more safely by keeping your GPS unit within reach at all times without obstructing your windshield view. You can also follow state laws that prohibit windshield-mounted GPSes by using a mount that's designed to sit on your dashboard.
- Let your passenger program your GPS while you keep your eyes on the road with a mount that lets them swivel the unit toward them.
- Make other devices more accessible with a mount that is also compatible with select MP3 players and mobile phones.

Bluetooth Car Kits

- Catch up with friends or make destination plans without taking your hands off the wheel or your eyes off the road.
- Pair your spouse's phone to a Bluetooth car kit that can support multiple devices to help him drive more safely, too.
- Avoid missing important phone calls with a car kit that automatically mutes your car stereo for incoming calls.

BY KRIS GLASER BRAMBILA

FirstGlimpse

HOW TO BUY

Gaming Accessories

Boost Your Game Console With Add-ons



A really good video game immerses you in arresting visuals, audio, and story lines that let you temporarily escape reality. Gaming accessories enhance the sense of realism while simultaneously bolstering game performance.

Consult the manufacturer. To find out which accessories are suited to a particular game or console, check the game developer and console maker's suggestions. Further, know that third-party vendors create accessories that are often packed with advanced features that can help enhance your gaming experience.

... third-party vendors create accessories that are often packed with advanced features ...

Check for compatibility. You may want to consider additional controllers for multiplayer games or to acquire special features. Keep in mind that a controller that works with one console may not work with another. . . . a controller that works with one console may not work with another . . .

Built to communicate. Many games, such as MMORPGs, let you play and communicate simultaneously with others via an Internet connection and wired/wireless headset. A headset with noise-cancelling and echo-reducing technologies will reduce ambient noise and generate clearer speech.

Gaming you can feel. Whether hitting a tennis ball, nose-diving a jet fighter, or battling a large-mouth bass, accessories with integrated force feedback technology bring the physicality occurring within a game out into the real world. In a driving game, for example, look for a steering wheel with force feedback technology to get a better sense of what crashing into a wall, going airborne, or driving on a slick track at 200mph feels like. . . . bring the physicality occurring within a game into the real world.



What eReaders Have To Offer

Beyond The eBooks

eReaders are clearly part of the growing digital library. In fact, you can take your entire book collection with you on one eReader device. But, an eReader has more tricks up its book sleeve, so take a look at what you can do with these portable book keepers.

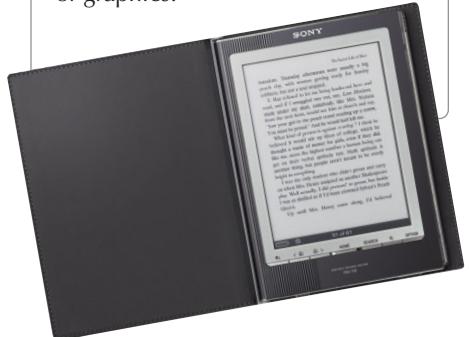
Store extras. You can certainly browse and purchase eBooks wirelessly, but there are plenty of newspapers and magazines to peruse, as well. Some eReaders let you read color digital versions of your favorite daily paper or monthly magazine. Built-in storage can hold anywhere from 350 to 1,500 eBooks, depending on the eReader model, giving you plenty of room for checking out public library books and free titles from online sharing sites or independent publishers.

Share eBooks. When you've determined which eBooks are your favorite, lend them to a friend or family member. If your mom or best friend would like to read the latest nonfiction title at the top of *The New York Times'* Best Seller list, you can share your eReader's copy for a limited period of time with their device if both support eReader share software.

Play audio and games.

As a multifunctional device, it's no surprise that eReaders have room for hours of audio books or music. If you plug in a set of headphones, you can enjoy your favorite tunes as you read a newspaper article at the same time. Gaming on select eReaders can keep you occupied with digital games such as Sudoku and chess.

Download docs. Not unlike a tablet PC, some eReaders support multiple formats beyond an eBook, eNewspaper, or eMagazine. For instance, you can view text in PDFs and word processing documents, as well as view JPEG, PNG, GIF, and BMP photos or graphics.



BY JOANNA SAFFORD

This Month's Blu-ray Disc Releases

Iron Man 2



Rating: PG-13 | MSRP: \$39.99* | SKU: 1161807

Release Date: 9/28/2010



Letters To Juliet



Rating: PG | MSRP: \$40.99* | SKU: 1203612

Release Date: 9/14/2010



MacGruber



Rating: N/A | MSRP: \$39.98* | SKU: 1169945

Release Date: 9/7/2010



	Date	MSRP*	SKU	Rating
September				
A Bug's Life	9/28	\$39.99	18725002	G
Adventureland	9/28	\$26.50	18724959	R
America: The Story Of Us	9/14	\$49.95	18540621	N/A
American Beauty	9/21	\$24.99	1181807	R
Bored To Death:	9/21	\$44.99	1170122	TVMA
The Complete First Season				
Camp Rock 2: The Final Jam	9/7	\$24.99	1143838	N/A
Confessions Of A Shopaholic	9/28	\$26.50	18724977	PG
Forbidden Planet	9/7	\$24.99	1171097	G
Fringe: The Complete Second Season	9/14	\$54.99	1168027	N/A
G-Force	9/28	\$39.99	18725057	PG
Glee: The Complete First Season	9/14	\$47.99	1168063	N/A
Hannah Montana: The Movie	9/28	\$29.99	18725481	G
High School Musical 3	9/28	\$29.99	18725551	G
Inkheart	9/14	\$19.98	18703365	PG
Iron Man 2	9/28	\$39.99	1161807	PG-13
It's Always Sunny In Philadelphia: Season 5	9/14	\$39.99	1168188	N/A
Just Wright	9/14	\$29.99	1195985	N/A
League: Season 1	9/14	\$34.98	1196083	N/A
Letters To Juliet	9/14	\$40.99	1203612	PG
Lost In Space	9/7	\$24.99	1171389	PG-13
MacGruber	9/7	\$39.98	1169945	N/A
Mars Attacks!	9/7	\$24.99	1171015	PG-13
Mercury Rising	9/14	\$22.99	1089442	R
Modern Family: Season 1	9/21	\$46.99	1196001	N/A
Monsters Inc.	9/28	\$39.99	18725445	G
One Flew Over The Cuckoo's Nest	9/14	\$29.99	1171607	N/A
Poltergeist	9/7	\$24.98	18660651	PG
Smallville: The Complete Ninth Season	9/7	\$54.99	1155493	N/A
Solitary Man	9/7	\$39.98	1085977	R
Stardust	9/7	\$29.99	1085216	PG-13
Stomp The Yard: Homecoming	9/21	\$30.95	1203694	N/A
Supernatural: The Complete Fifth Season	9/7	\$54.99	1155906	N/A
That Evening Sun	9/14	\$29.97	18711628	PG-13
The Big Bang Theory: The Complete Third Season	9/14	\$44.99	1171079	N/A
The Black Dahlia	9/7	\$22.99	1089337	R
The Golden Compass	9/14	\$19.98	18703531	PG-13
The Lord Of The Rings: The Fellowship Of The Ring	9/14	\$24.99	1171176	PG-13
The Lord Of The Rings: The Return Of The King	9/14	\$24.99	1171325	PG-13
The Lord Of The Rings: The Two Towers	9/14	\$24.99	1170999	PG-13
The Matrix Reloaded	9/7	\$19.99	1171194	R
The Office: Season Six	9/7	\$49.99	1089433	N/A
The Order	9/14	\$24.99	18664171	R
The Proposal	9/28	\$39.99	18724931	PG-13
Thomas & Friends: Misty Island Rescue	9/7	\$22.99	1149517	N/A
Tinker Bell & The Great Fairy Rescue	9/21	\$29.99	9930049	G

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Parental Control

Restrictions For Your Kids' Gaming

Game consoles let kids do much more than just play video games. They can access the Internet, download media, and play CDs and DVDs. While this makes for a great entertainment station for your family, it can make controlling the

content your kids can access more difficult. Many game console manufacturers try to make a parent's job easier by including parental controls that let you restrict access to content from a variety of media sources in different ways.

Time Restrictions

To prevent your youngsters from spending too much time in front of the TV, you can place daily or weekly gameplay time limits on most game consoles. These settings will block children from playing games beyond the time limits you implement by prompting the user to enter a parental control PIN or password to play games for a longer amount of time. Also, depending on the console, parents can look up how long their children have been playing video games.

Not Just For Kids

Because adults enjoy the benefits of having a game console just as much as kids do, you can turn off parental control settings anytime you want. All you need is your PIN or password, and you can access movies or games that aren't age-appropriate for your children. You also have the option of disabling the game console's parental control settings and re-enabling them when you're done using your game console. Oftentimes, a game console won't require that you re-enter parental control settings after you've turned them back on.



Content Restrictions

ESRB ratings are designed to inform parents of a game's content so they can decide if it's suitable for their children. Some consoles let you restrict ESRB ratings so only games with a particular rating can be played on the console or downloaded from an online store. Parents might also have the option of blocking certain movie ratings, such as PG-13- or R-rated content, depending on the console.

Many games can be accessed online through the console's Web browser without having to download them to the

actual console, so some let you decide whether your child can access Internet or live games. Depending on your console, you might be able to control the level of the Internet restriction. Or if your console provides access to an online store, you can adjust settings that will allow particular access. Some consoles will block a user from using the Web browser, while others will let you plug in keywords or URLs to block. And if you don't want Junior and his friends spending lots of money on games while you're not home, you can restrict access to the online store so you have the final say about purchases.

ESSENTIAL THINGS TO KNOW

Kids' Learning Systems

Q Are there kids' learning products for different age ranges?

A Yes. You'll typically find systems for kids ages 2 to 4, 4 to 8, and 6 to 10 at your local CE retailer.

Q Do I need to worry about batteries?

A Most learning systems are portable, so you will need batteries. Check the packaging to see what type is necessary and whether batteries are included.

Q How difficult are these for children to use?

A Most learning systems have minimal buttons and a touchscreen that offers a customized, easy-to-navigate interface for each software title. Products for younger children also use minimal or no text so that reading is not required.

Q There seem to be lots of games for these, so why are they called learning systems?

A Most software titles disguise teaching with gameplay, so kids learn as they have fun.

Q Do I need a PC to use any of these systems?

A No, although many systems can interact with a PC to let children customize content, such as in-game characters.

Q If a new learning system comes out later, will all the cartridges I buy now become obsolete?

A There are no guarantees, but newer models are often backward-compatible with older games. However, the latest games might not look as good and could have fewer options when played on older hardware.

Q Do I need Internet access to use any of these systems?

A It isn't a requirement, but a PC with Internet access can complement most systems. Kids can download new content for software titles, and parents can use Web services to check the progress their children have made.

Q What accessories should I consider?

A A storage case is excellent for keeping the system and software cartridges organized. Some systems also have recharging stations or AC adapters available that can help you avoid constant requests for new batteries.

Q How do the reading systems work?

A Reading systems for toddlers read the pages to them and let them interact with pictures and other elements on a page. The reading systems for older kids read entire books and also let children tap any word with the included pen to have it read to them so they can get help when reading by themselves.



Which Gaming System Is Best For You?

Game consoles and portable devices are no longer limited to gameplay. They can also access the Internet, download media, and play your favorite DVDs or CDs. To help you find a gaming device that will suit you best, here's a comparison of the most popular selections you can find at your local CE retailer.

What It Means		Hard drive size	Compatible memory cards	Optical drive	Video resolution output	Ports
Console Devices	 Sony PlayStation 3 With PlayStation Move MSRP: \$399.99* SKU 1122275	320GB	PlayStation and PlayStation 2 cards with optional USB memory card adapter	CD, DVD, BD	1,920 x 1,080	1 A/V, 1 Ethernet, 1 HDMI, 1 optical digital audio, 2 USB
	 Nintendo Wii MSRP: \$199.99* SKU 9916446	512MB	SD/Nintendo GameCube Memory Card	Can only play game titles	720 x 480	4 controller, 1 Component, 1 Composite, 1 S-Video, 2 USB
	 Microsoft Xbox 360 MSRP: \$299.99* SKU 1069212	250GB	USB flash drive	N/A	1,920 x 1,080	1 optical audio out, 1 Ethernet, 1 HDMI, 5 USB, Kinect port
	 Nintendo DSi MSRP: \$169.99* SKU 9249725	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
	 Nintendo DSi XL MSRP: \$189.99* SKU 9760166	256MB	SD	None	Dual 256 x 192	1 headphone, 1 microphone
	 Sony PSPgo MSRP: \$249.99* SKU 9459659	16GB	Memory Stick Micro	None; download to internal and removable memory only	480 x 272	1 USB, 1 headphone
Portable Devices	 Sony PlayStation Portable 3000 MSRP: \$169.99* SKU 9175082	64MB	Memory Stick Duo	UMD (Universal Media Disc)	480 x 272	1 video out/ headset, 1 USB, 1 DC out

*Prices listed in this issue are for general reference and may vary from retailer pricing.

GAMING, MEDIA & MORE

Online community	Wi-Fi access; Media streaming	Parental controls	Compatible game formats	Included accessories & services	Available accessories	Controllers	Perfect for
Web site membership for downloads, upgrades, and more	Access the Internet without a cable hookup; Send and receive media wirelessly	Helps parents decide what content their kids can or cannot access	Game titles that can be played on the game system	Accessories included with the console	Extras that can help enhance your gameplay	Included controllers; wired/wireless controller compatibility	Who can benefit from the special features the gaming system offers
Yes, free PlayStation Network membership	Yes, 802.11b/g; Yes—Netflix and content from your home network	Options available for games, BDs, DVDs, and Internet access	Sony PlayStation 3 titles and select PlayStation titles	DualShock 3 wireless controller, Move motion controller, Eye Camera, USB cable, PlayStation Network membership, A/V cable	Move Navigation controller, Blu-ray remote, Bluetooth headset, memory card adapter, wireless keypad, cables	Includes 1 DualShock 3 wireless controller; wireless	Someone who wants the value of a full gaming system with a BD player and media streaming
Nintendo Wi-Fi Connection	Yes, 802.11b/g; Yes—Netflix	Options available for games, online features and downloads, and more	Nintendo GameCube and Wii titles	Wii remote and nunchuck, sensor bar, Wii Sports game, console stand, A/V cable, adapter	Wireless Wii remote, wheel, classic (wired) controllers, wireless sensor bar	Includes 1 wireless Wii remote and nunchuck; both (some titles require a wired remote)	Gamers of any age who want a unique wireless gaming experience that requires little gaming knowledge
Xbox Live	Yes, 802.11b/g; Yes—Netflix and content from your home network	Options available for games, Xbox Live, console play time, and a Family Settings pass code	N/A	Wireless controller, Xbox Live headset, A/V cable, free one-month trial to Xbox Live Gold	HDMI cable, USB flash drive, Play & Charge Kit	Includes 1 wireless controller; wireless (Kinect coming later this year)	Those who want an updated Xbox console with more storage capacity, built-in wireless capabilities, and more
Nintendo Wi-Fi Connection	Yes; Yes	Options available for Nintendo DSi content	Nintendo DSi and Nintendo DS titles	AC adapter, 2 styli	Audio headset, battery power pack, screen protectors, carrying cases, styli	N/A	Users who want a handheld gaming system that lets them take, personalize, and share photos
Nintendo Wi-Fi Connection	Yes; Yes	Options available for DSi software, DSi Browser, DSi Shop, and more	N/A	Rechargeable battery, AC adapter, stylus, and 4 preinstalled titles	Cases, adapters, headphones, full-sized stylus	N/A	Those who want a handheld gaming system better-suited for social gaming with a large screen
Yes, PlayStation Network	Yes, 802.11b; Yes	Included	Available for download from PlayStation store	AC adapter, USB cable	Protective screen film, cradle, headphones, memory cards, cases	N/A	Those who need a bigger screen for their gaming, Internet, and media entertainment
Yes, free PlayStation Network membership	Yes, 802.11b; No	Options available for UMDs, Internet, and video downloads	PlayStation Portable titles	AC adapter, battery pack	Battery charger, travel case, memory cards, A/V cable, AC adapter, car adapter	N/A	Those who want to enjoy gaming as well as movies, photos, and music when they're on the go

ESRB Game Ratings & Descriptions

Find Material That's Appropriate For Your Kids

ESRB (Entertainment Software Rating Board) Ratings

In order for parents to select gaming software appropriate for their children, ESRB (www.esrb.org) ratings are listed on the front and back of most game packages to provide concise and impartial details about a title's content.



Early Childhood.

Titles with this rating have content that may be suitable for children ages 3 and older. These software titles contain no material that parents would find inappropriate.



Everyone.

Titles with this rating have content that may be suitable for children ages 6 and older. Games in this category may contain minimal cartoon, fantasy, or mild violence and infrequent use of mild language.



Everyone 10+.

Titles with this rating have content that may be suitable for children ages 10 and older. Games in this category may contain more cartoon, fantasy, or mild violence and language as well as minimal suggestive themes.



Teen.

Titles with this rating have content that may be suitable for children ages 13 and older. Titles in this category may contain violence, suggestive themes, crude humor, minimal blood, simulated gambling, or infrequent use of strong language.



Mature.

Titles with this rating have content that may be suitable for persons ages 17 and older. Games in this category may contain intense violence, blood and gore, sexual content, or strong language.



Adults Only.

Titles with this rating have content that is only suitable for persons 18 years and older. Games in this category may include prolonged scenes of intense violence, graphic sexual content, or nudity.

For additional information, ESRB ratings on the back of game packages include content descriptions and depictions.



GAMING TIPS FOR PARENTS

Aside from checking a game's ESRB ratings, there are other ways you can ensure the games your youngsters are playing are age-appropriate.

- Carefully look at everything on a title's packaging, including the game graphics.

- Find game reviews, screen shots, or demos to get a better idea of a game's content.
- If available, use the game's parental controls to restrict inappropriate content.
- Learn about games by talking to other parents and older children who are familiar with or have played certain titles.
- Participate in your children's gaming and discuss their games as much as possible.
- Be aware of nonrated ESRB material a game may contain. "Mods" are program downloads that can alter a game's content, and online games often have live player chats as well as other user-generated content.

NOTEWORTHY Accessories & Services



RACING WHEELS

- A gaming steering wheel puts you in the driver's seat of a virtual race
- A comfortable, accurate wheel will give you more control with turns, braking, and acceleration
- Be sure to purchase a racing wheel that's compatible with your specific gaming console



USB DEVICES

- A USB media hub will let you connect other USB devices (including MP3 players and portable gaming devices) to your game console
- Use a USB rechargeable battery pack to charge the Li-Ion battery for guitar controllers



GAMING KEYBOARD

- Adding a keyboard can help game efficiency—type in text codes and chat with other players quickly
- Look for a model with a touchpad so you can easily scroll around the game display
- Models that offer hotkeys will enable you to quickly perform tasks, such as gameplay actions



MUSIC CONTROLLER ACCESSORIES

- Add a heavy-duty bass pedal to your gaming drum set to replace your standard pedal
- A tripod microphone stand will make your song-based games more true to life
- Extra cymbals for your rock drum kit will give you more freedom to express musical ability



EXTERNAL MEMORY

- External hard drives, USB drives, or memory cards back up your in-progress games
- When additional memory is connected to live (online) games, you can save gaming content and downloads
- The more memory you have, the more games and downloads you'll be able to store



WIRELESS CONTROLLER

- Bluetooth technology lets you play while also having the freedom to move around
- Some controllers use traditional AAA batteries to sustain your playing time
- Find the best design for your grip: ergonomic or traditional



HEADSETS

- Use a hands-free headset to enhance your gaming experience by planning strategies aloud with your team
- A Bluetooth 2.0 headset is designed to communicate with your gaming console; Bluetooth headsets will be compatible with most game consoles
- Consider noise-canceling headsets with echo-minimizing microphones so you can hear and be heard clearly



GAMING SERVICES

Your local CE retailer provides some helpful services, both in-home and in-store, to enhance your gaming console. Specifically, the professionals can set up online connections, install system updates, and transfer data to a gaming storage device.

- Configure online accounts
- Console system updates
- Stream media from a PC to a gaming console
- Connect a console to a home-theater system

HOW TO BUY A

Washer & Dryer

Find A Better Way To Do Laundry



Far from a mundane task, buying a new washer and dryer is actually an opportunity to take advantage of cool new technologies. They can get your clothes cleaner, make them last longer, and even save you money.

Energy and water savings. A new washer can be friendlier to the environment and cheaper to run than your old one. Look for a model with the Energy Star logo to help you save on your electric bill. Next, consider a high-efficiency washer. These use less water and less detergent than a traditional washer, especially if you use HE-compatible soap. They also spin out more water after the rinse cycles to reduce the amount of time your laundry needs to be in the dryer.

... use less water and less detergent than a traditional washer, especially if you use HE-compatible soap.

Front-loading washer advantages.

Consider buying a front-loading washer instead of a top-loader. They generally have bigger drums, so you can wash your clothing in fewer loads. A front-loader's tumbling action is gentler to your hand-washables than a top-loader's central agitator. It's also more compatible with bulky items such as comforters.

... you can wash your clothing in fewer loads.

Sensing technologies. Smart sensors help washers and dryers do their jobs more quickly and effectively. Certain washers monitor not only the amount and temperature of the water, but also the level of detergent suds and the

cleanliness of your clothes. And dryers with moisture sensors

turn off when your clothes are dry, not on a timer. This means you'll never have to add another 10 or 20 minutes because your clothes are still wet, and you won't waste energy by letting your dryer run longer than necessary.

... you won't waste energy ...

Alternate cycles. Steam is a useful feature in both washers and dryers. A steam washer uses high temperatures to neutralize allergens, such as dust mites, that ordinary washing

might leave behind. In a dryer, a steam cycle can tumble out wrinkles and remove odors from fabrics. Speaking of high temperatures, some washers' sanitizing cycles use hot water or other means to kill microbes.

... tumble out wrinkles and remove odors.

Bosch

Vision Laundry

More Efficient By Design

Bosch (www.bosch-home.com/us) offers the most energy- and water-efficient full-sized front load washers in the United States, which provide superior cleaning results while exceeding Energy Star qualifications. The combination of efficiency, safety, value, and engineering means there's a model for you.

When shopping Bosch's wide assortment of appliances in kitchen and laundry, look for the Green Technology Inside logo, which denotes efficient products that offer top performance and are produced in an environmentally friendly way.

Eco-Friendly

Good washing action requires movement and water. Bosch's Vision washers feature an ActiveWater System that maximizes the cleaning power of each gallon. The ActiveWater System consumes an average of 13 gallons per cycle to help lower your water bill, but washes with the power of 400 gallons.

Every Bosch Vision washer and dryer features EcoAction, which is an option that can be paired with a cycle to decrease temperature and slightly increase the cycle time mode to conserve power. The EcoAction mode reduces energy consumption by 20% in washers and 10% in dryers.



Smart Engineering

Remove 14 different stains with just the touch of a button. Different stains require different temperatures to treat them, so the Stain Removal Option brings the water into the washing machine at tap temperature and incrementally increases water temperature (with the built-in water heater) to target each stain at the optimal level.

Whether the washer and dryer are upstairs or down in the basement, no one wants to hear a rattling machine. Bosch's AVS Anti-vibration technology drastically reduces vibration and noise from unbalanced loads during the spin cycle. Bosch also offers an exclusive water safety system known as AquaStop technology, which protects against damaging leaks and floods.

WASHER SKU MSRP*	300 Series 9848912 \$799.99	500 Series 9849108 \$1,099.99	DRYER SKU MSRP*	300 Series (Elec.) 9848463 \$799.99	500 Series (Elec.) 9849083 \$999.99
Capacity	4.4 cu. ft	4.4 cu. ft	Capacity	6.7 cu. ft	6.7 cu. ft
Spin Speed	1100rpm	1150rpm	Silence Rating	64dBA	64dBA
Cycles	11	15	Cycles	11	15
Internal Water	Yes	Yes	Display	LED	LED
Display	LED	LED	Dryer Rack	No	No
Time	Quick Full	Quick Light	Time	20, 40, 60 min	20, 40, 60 min
Options	EcoAction™ Allergy Rinse	EcoAction™ Allergy Rinse Stain Removal	Drum	One Piece Stainless	One Piece Stainless
Special Cycle	XxtraSanitary™	XxtraSanitary™ Comforter, Jeans, Baby Care	Options	EcoAction™ Delicates	EcoAction™ Delicates
Safety		AquaStop™	Special Cycles	Time Dry	Jeans Steam Cycles
			Safety	Klixon Sensors	Klixon Sensors

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Get The Best Shave

Philips Norelco Shavers

Philips Norelco (www.philips.com/Norelco) has a variety of products designed to keep you looking your best. Check out the details below.

SensoTouch 3D 1250X

MSRP: \$229.99* SKU: 1211499

- GyroFlex 3D provides three-dimensional contouring to adjust seamlessly to the contours of your face, minimizing pressure and irritation.
- UltraTrack heads have three specialized shaving tracks, slots, channels, and holes, to catch every hair, in just a few strokes.
- SkinGlide system minimizes pressure and irritation, allowing the razor to glide seamlessly over the skin.



SensoTouch 1150X

MSRP: \$129.99* SKU: 1211393

- GyroFlex 2D system follows the contours of your face, minimizing pressure and irritation.
- Aquatec seal gives you the option of a comfortable dry or refreshing wet shave.
- DualPrecision heads have slots to shave the normal hairs and holes to shave the shortest stubble.
- Lift & Cut Technology gently lifts hairs to cut comfortably below skin level.



QC5170

MSRP: \$39.99 SKU: 9934276

- Cut your own hair with a hair clipper that features 10 secured length settings up to 21mm.
- Special combs follow every contour of your head and turn 180 degrees for the spots you can't see.



QT4021/63

MSRP: \$39.99 SKU: 9779352

- Stubble and beard trimmer features a comb design that avoids contact between the blades and your skin.
- Uses SteelWave self-sharpening blades for precise results.



SensoTouch With Jet Clean 1160CC

MSRP: \$179.99* SKU: 1211426

- Jet Clean system cleans and lubricates the blades and charges the battery after every use.
- GyroFlex 2D system follows the contours of your face, minimizing pressure and irritation.
- Aquatec seal gives you the option of a comfortable dry or refreshing wet shave.
- Lift & Cut Technology gently lifts hairs to cut comfortably below skin level.



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ESSENTIAL THINGS TO KNOW

Floor Care

Q What types of floor care products are available?

A Vacuums, hard floor cleaners, and steam cleaners are available. Vacuum types include upright, canister, handheld, stick, robot, commercial, and garage, so you can find a vacuum that best fits your cleaning needs.

Q What's the best vacuum filtration system for keeping my indoor environment clean?

A A vacuum with a HEPA filter is best at purifying the carpet and air in your home. HEPA filters trap small particles such as pollen and other allergens, so they're not circulated back into the environment.

Q What's the difference between a canister vacuum and an upright vacuum?

A An upright vacuum is best for traditional vacuuming needs, such as rugs, carpeting, and hardwood floors. A canister vacuum is best for stairs, drapes, upholstery, and hard-to-reach areas, and due to a smaller size, it's easier to use and store.

Q What is the difference between bagged vacuums and bagless vacuums?

A A bag vacuum collects dust, dirt, and debris in a disposable bag that can easily be thrown away and replaced. Bagless vacuums collect household waste in a canister or container, which means you don't have to buy replacement bags.

Q How can I use a handheld or stick vacuum in my home?

A Handheld and stick vacuums can be used for light vacuuming jobs and quick touch-ups. They are small and lightweight, making them easy to store and handle, and many are cordless and instead feature rechargeable batteries.

Q What type of vacuum should I use on my home's hardwood floors?

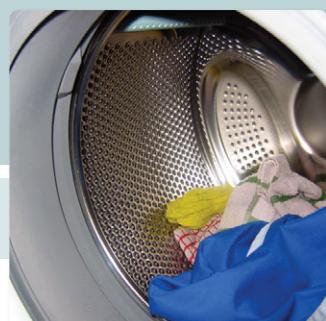
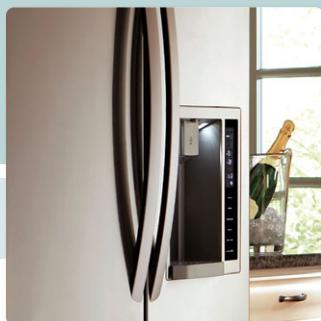
A You should consider a bare floor vacuum, which will work on hardwood floors, tile, laminate, and other bare floors, or a multisurface vacuum, which can be used on both carpet and bare floors.

Q What is the difference between steam cleaners and steam mops?

A Steam cleaners are similar to upright vacuums and use a combination of steam and strong suction action to deep-clean carpets and remove ground-in stains. Steam mops are smaller and more lightweight and can be used on tile, ceramic, and hardwood floors to clean up spills and disinfect floors.

Q What type of vacuum should I look for to clean up after my pets?

A Vacuums that are pet-specific include extra features that make cleaning up after your furry friend easy, such as extra brushes and tools and stronger suction.



NOTEWORTHY Accessories & Services



VACUUM BELTS, BAGS & FILTERS

- Replace vacuum belts every year for optimum performance.
- Trap airborne pollutants, such as household dust, particles, and debris with micro allergen or hepa filter vacuum bags and filters.



GAS FLEX LINES

- **Ranges and laundry dryers.** Gas lines aren't included with these appliances, so you'll need to pick one up.
- With an auto shutoff feature, you can protect your home from gas leaks
- Professional installers require a new gas line.



LAUNDRY PEDESTALS

- Raise your front-loading washer and dryer to an easy-to-access and more ergonomic height.
- Store laundry supplies in pedestals that double as drawers.



HIGH-EFFICIENCY LAUNDRY DETERGENT

- Wash clothes better with a detergent that's formulated to work with a high-efficiency washer.
- HE detergent prevents damage to your washer, such as leaking, vibration, and poor spinning.



UPHOLSTERY & FLOOR CLEANING AGENTS

- Make cleaning easy with products made for particular surfaces, such as multi-floor, wood floors, carpet, and upholstery.
- Some agents can be used with a variety of products, but others are for specific product use.

After you've selected an appliance, you need to make sure you have all of the necessary extras, such as cords or hoses for installation. It's also good to consider if you want a professional to deliver and install your unit. By adding the accessories below, you can ensure your appliance's performance remains top-notch.



REFRIGERATOR BULBS & FILTERS

- Keep a spare bulb on hand to replace burnt out interior lights.
- Ensure your dispensed water and ice always taste fresh with extra water filters.



ELECTRICAL CORDS

Power cords aren't included with these appliances. Here's what you should know:

- **Washers and dryers.** All new models use 4-prong cords, but models made before 1984 require a 3-prong cord replacement.
- **Dishwashers.** Purchase a three-prong cord individually or in a kit that includes a water line.
- **Ranges.** Check your home's electrical outlet to get either a 3-prong or 4-prong cord.



WATER LINES

- **Refrigerators.** Some models include plastic water lines, which are susceptible to twisting or leaks. A better alternative is a line made of metal, such as copper or stainless steel.
- **Washing machines.** Don't settle for the rubber hose that comes with your machine, as it can burst. Instead, opt for a durable stainless steel hose that will last longer.

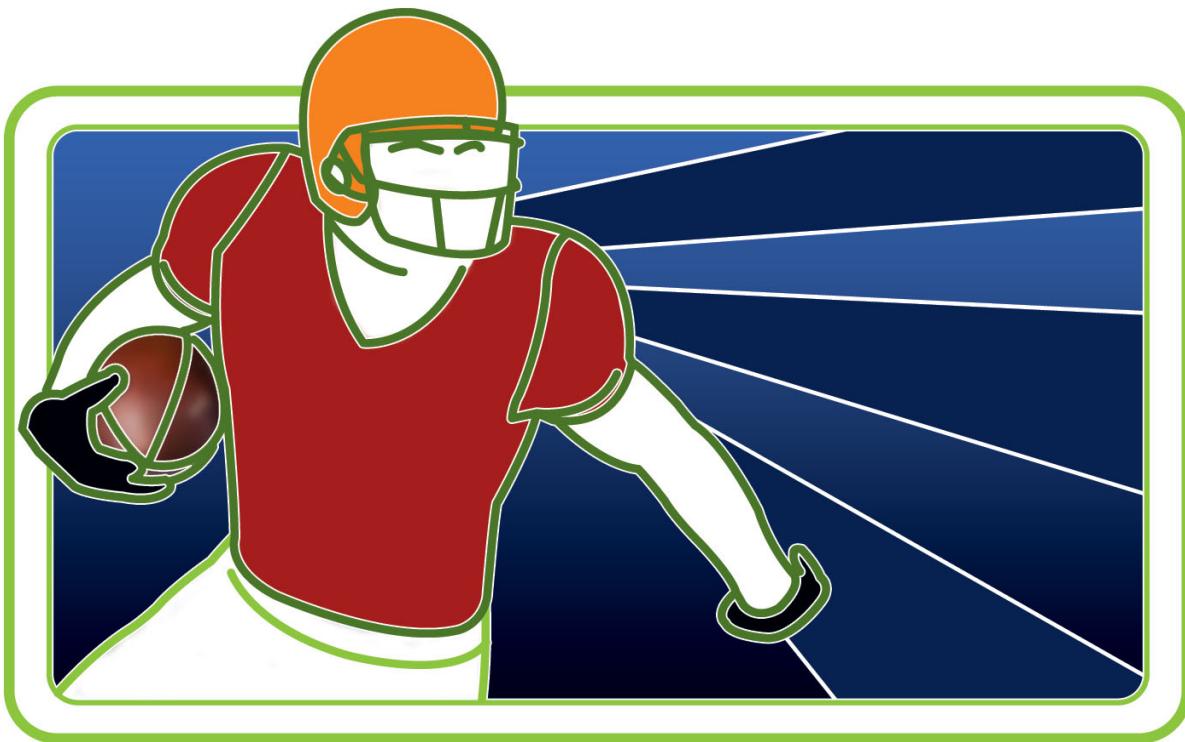
- **Dishwashers.** Reusing an old water line can lead to water damage. Instead, get a dishwasher kit that includes a water line and power cord for the best performance.



APPLIANCES SERVICES

Whether you're buying a new unit or need to tune up your existing one, CE retailers offer professional services like the ones below to help get your appliance up and running in no time.

- Delivery & Installation
- Appliance Recycling
- Appliance Service Plans
- Appliance Repairs



3D TV

Monsters vs. Aliens. The World Cup. WipEout HD.

3D Blu-ray Discs, TV programs, and video games are ready for your living room, and these examples are just the tip of the iceberg.

How The New 3D Works

The entertainment electronics industry has finally standardized (more or less) home-theater gear that supports new 3D content. The secret sauce of the new generation of equipment has two basic components.

One is an HDTV with 3D compatibility that can receive and display video signals that change very rapidly, such as 120 or 240 times per second. The other is active LCD shutter eyewear, which are powered glasses that "wink" just as fast. While the 3D TV presents slightly

different frames of video at a very fast pace, the eyewear alternately dims your left or right field of vision in perfect sync.

Because your left and right eyes see differing images, for most people the result is a believable illusion of three-dimensional video depth. The effect is most realistic with video that was originally shot in 3D with two camera lenses, although 2D content can be converted to 3D, too.

What You Need For 3D

Besides a new 3D HDTV and compatible eyewear, you'll need to buy a few other things to bring 3D into your own home theater. You'll need a source of 3D content such as games or TV programming. If you plan to watch 3D movies on compatible BDs (Blu-ray Discs), you'll need a 3D-ready BD player and an HDMI cable with 10.2Gbps or higher speed.

Optionally, if you want to route the video through an A/V receiver, it must allow the 3D signal to reach the TV unimpeded (this is called 3D pass-through support). You'll also need another high-speed HDMI cable to connect the receiver to your TV.

3D-ready HDTVs. Older HDTVs with 3D capabilities may or may not work with the new standards of 3D media, such as 3D Blu-ray Discs. Unfortunately, it's unclear right now just how compatible earlier 3D TVs will prove to be. Your best bet for the most supportive 3D home theater is to start with a new HDTV specifically made for today's discs, TV programs, and games.

It's absolutely crucial that you try out a 3D TV before you buy. To test it with the best picture possible, watch both ordinary BD content in 2D mode (without the eyewear) and a 3D Blu-ray

Disc in 3D mode. TV manufacturers may recommend certain conditions for the best 3D viewing experience, such as using a specific picture mode and watching in a dark room.

In 3D mode, check for any flicker in the picture. Also watch out for blurring and/or color shifting of the image, which indicates crosstalk (the eyewear is allowing one eye to briefly glimpse the picture intended for the other eye). Some TVs are currently better about minimizing 3D crosstalk and ghosting (motion blur) than others.

Also note what happens in 3D mode when you tilt your head to one side or back. For example, some eyewear makes the screen seem darker, while others display color distortion or crosstalk.

Eyewear. It's important that a TV's active shutter glasses feel comfortable to you, especially if you wear prescription lenses. Some 3D TVs come with one or two sets of eyewear, while some 3D-ready models don't include any.

Right now TV manufacturers are the best sources of eyewear compatible with their 3D sets. This is because eyewear made for one TV may make the picture of another 3D TV look tinted with color. Also, 3D TVs use various methods of synchronizing their pictures with their eyewear, including IR (infrared light), RF (radio frequencies), and Bluetooth. Finally, some glasses are optimized for easy battery recharging, while others aren't.

3D In Your Life

Just wait until you experience a 3D Blu-ray Disc movie such as "Toy Story 3" on a display that's sharper than a cinema's projection screen. You might also look forward to sharing your love of sports

with the kids in a way that grabs their attention better than a video game. Speaking of which, 3D games will provide you with a more immersive and compelling gameplay.

3D has cycled in and out of the cinema for decades. Perhaps the living room will give it a permanent home. **FG**

BY MARTY SEMS



A couple of accessories later (about \$200 for eyewear and a sync transmitter), Sony's BRAVIA KDL-HX800 series of HDTVs turns into a 3D entertainment platform. You can choose among the 40-inch KDL-40HX800 (\$1,889.99), the 46-inch KDL-46HX800 (\$2,429.99), and the 54.6-inch KDL-55HX800 (\$3,059.99).

Sony's BRAVIA KDL-HX800 HDTVs With 3D

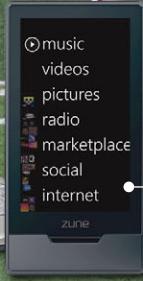
Start with an LED-LCD Sony BRAVIA HDTV with Full HD, 1080p capability. Add in a MotionFlow PRO 240Hz refresh rate, and BRAVIA Engine 3 video processing on a Deep Black Panel. Mix with online video streaming from Netflix, YouTube, Pandora, and others, not to mention DLNA multimedia streaming from your PC. You'd be forgiven for stopping there, as you would have an HDTV packed with desirable features.

Of course, this article being what it is, you should be able to guess that there's more to the KDL-HX800 series. It's 3D-ready. Buy Sony's active shutter glasses (\$149.99 per pair) and sync transmitter (\$49.99) separately, and you're all set for multidimensional entertainment the likes of which your home theater has never seen. An optional Wi-Fi adapter (\$79.99) illustrates another way in which this line of BRAVIA HDTVs can grow with your needs. ●

Essential Gadgets For Spectators

Get Ready For Football Season

With the heat of summer in the past, September brings weekends you can spend watching your favorite football teams, whether in the stadium or from the comfort of your living room. Here are some devices available at your local CE retailer that can make either experience even better.



Sony VAIO Mini Netbook

Set your fantasy football teams and monitor them during the day using a Wi-Fi connection. Or, chat with opponents face-to-face with a built-in Web cam.

\$399.99



George Foreman Lean Mean Fryer

Cook up some deep-fried wings for your next tailgate. A unique spin cycle will spin out fat after frying for a healthier result.

\$149.99

Microsoft Zune HD MP3 Player

Whether you're actually at the game or just working out in the yard, use the built-in FM radio or HD radio tuners to get a radio play-by-play. Or, if you have access to a Wi-Fi connection, you can browse the Internet to check scores.

\$199.99



Samsung 55-inch 3D LED-LCD

Watch your favorite college and professional football teams all weekend on this big-screen 1080p HDTV. And if you have access to ESPN 3D, you can watch select college games in 3D.

\$3,299.99

Madden NFL 11

Available for multiple platforms, Madden NFL 11 lets you run the plays for your favorite NFL teams and compete in games against friends.

Price varies by platform



Bushnell PowerView Compact Binoculars

Get a good view of the field even from the nosebleed section with a pair of binoculars slim enough to fit in a purse or pocket.

\$15.99



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